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# THE WHITE NORTH

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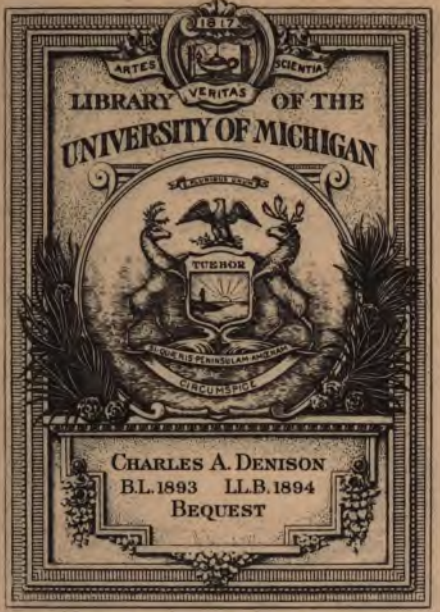
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# THE WHITE NORTH.

BREAKING IN THE DOGS.

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BREAKING IN THE DOGS.

Page 154

# THE WHITE NORTH

*With Nordenskiöld, De Long, and Nansen*

BY

M. DOUGLAS

*Author of "Across Greenland's Ice-Fields,"*
*"Breaking the Record,"*
*&c. &c.*

THOMAS NELSON AND SONS
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# AUTHOR'S NOTE.

In offering "The White North" to the British public, the writer desires to express a sincere hope that some at least may be sufficiently interested in the story of Nordenskiöld, De Long, and Nansen, to seek fuller information concerning their doings in their own records, "The Voyage of the *Vega*," "The Voyage of the *Jeannette*," and "Farthest North," wherein all that they did and suffered in the cause of science is fully set forth.

M. D.

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# THE WHITE NORTH.

## CHAPTER I.

### THE NORTH-EAST PASSAGE.

FOR more than a thousand years the ice ramparts which enclose the North Pole have successfully defied every effort to carry them by assault. But the difficulty of the feat merely increased its attractiveness. Expedition after expedition sailed from many ports of many lands, but each in turn was worsted by the ever-victorious ice, and hundreds of "heroic sailor-souls" laid down their lives in the attempt to solve the problem of the "White North." Those who returned had many adventures to relate, and, as is usually the case when a mystery is in question, all kinds of theories were gravely put forth and steadfastly believed. Not the least imaginary of these was the widely-prevailing notion that the much-talked-of North-West Passage, and its scarcely less famous fellow the North-East Passage, had only to

be discovered to prove useful and practicable commercial routes.

After a long fight the ice yielded up the secret of the North-West Passage, but it not only demanded in exchange the lives of Sir John Franklin and his gallant comrades, but it retained its position as master of the situation, and declined to open the route. Half the riddle was thus unsatisfactorily solved; but though for hundreds of years English, Dutch, Russian, and Scandinavian explorers had been endeavouring to clear up the other half, the North-East Passage stubbornly preserved its mystery.

The English were first in the field, for Othere the Northman, who was, it is said,

> "The first that ever burst
> Into that silent sea,"

held the commission of Alfred the Truth-teller. He rounded the North Cape and pushed on to the White Sea, while

> "The days grew longer and longer,
> Till they became as one;
> And northward through the haze
> I saw the sullen blaze
> Of the red midnight sun."

Then the matter was allowed to drop; but the wonderful discoveries of the sixteenth century set adventurous spirits ablaze, and in 1556 an expedition, which sailed from the Thames under the command of Stephen Burrough, visited Novaia Zemlia and Waigatz Island.

A few years later (1580) Arthur Pet and Charles Jackman with two ships, the *George* and the *William*, sailed from Harwich, and made their way through heavy ice to the Kara Sea, which was then for the first time navigated by a British ship. Here a formidable-looking ice-pack barred further progress, and having already had more than enough experience of the ways of ice, the explorers decided to retreat. But they were reckoning without their host, for, having penetrated so far into the domain of the ice-king, they had to fight their way back foot by foot to Waigatz Island, where they reached open water. Some days later the ships parted company, and though in the course of the autumn the *George* anchored safely in the Thames, the *William* remained in the north, and probably was eventually lost, for she never returned to England.

The explorers' mantle now fell upon Holland, and three expeditions were sent out under the leadership of William Barents. The first of the three was chiefly remarkable for a wonderful encounter with a bear, "which showed most wonderfull strength," for, after being severely wounded by a bullet, she swam off at a good rate of speed. Barents and his companions, never having seen a Polar bear before, desired to take this remarkable animal alive; so they rowed after her, and threw a rope round her neck. Unfortunately this course did not commend itself to the bear, and she signified her displeasure in such an

unmistakable manner, that her would-be captors were alarmed, and slackened the rope, intending to make her swim after them. The bear, however, was not to be so easily disposed of, and swimming up to the boat, she placed her forepaws on the stern. Barents innocently supposed that she merely desired to rest; but finding that her intentions were not as peaceful as he had thought, the men prudently retired to the farther end of the boat. Fortunately for these valiant Dutchmen the rope which held the bear became entangled in the rudder, and the creature's sphere of action being thus curtailed, one of the men plucked up sufficient courage to step forward and "thrust her into the bodie with a half-pike." After this, as the bear fell down into the water, they towed her after them "till she was in a manner dead," when they killed her outright, and triumphantly took possession of her beautiful white coat.

Geographically speaking, this voyage was by no means barren of results, for while Barents explored the northern portion of Novaia Zemlia, another ship belonging to the expedition, after a good deal of trouble with drift-ice, visited Waigatz Island. Here the crew went ashore, and not only made acquaintance with some of the Samoyed inhabitants, but contrived to pay a visit to one of their sacred places and inspect their gods. Then they went on eastward of the river Kara, whence they concluded to return, as they were of opinion that they had practically discovered the

North-East Passage, and, so to speak, were already next door to China.

In this belief Barents, the following year, sailed with seven ships, of which six were merchantmen, in the expectation of easily reaching China or India *viâ* the North-East Passage. For a time all went well, and though in Yugor Strait troublesome ice was encountered, some Russians, who were interviewed by the sailors, assured them that navigation would soon be open. In the Kara Sea, however, heavy pack-ice made it necessary to anchor, and some of the crew landed to search for certain glittering crystals which they believed to be "a kind of diamont;" and while they were so engaged a bear, evidently considering their presence an intrusion, came up unobserved and caught one of the "diamont" seekers by the neck. The victim supposed one of his comrades was the aggressor, and inquired who was pulling him by the neck. The next man looked up at the question, but the sight of Bruin was enough for him, and shouting, "O mate, it is a bear!" he forthwith took to his heels.

The bear, thus left to follow his own will, crushed his victim's head like a nutshell; but as he began to devour his prey, the rest of the men screwed up their courage, and with guns and pikes attacked the bear, hoping to save their unlucky companion. Bruin, however, says the chronicler of the expedition, "fiercely and cruelly ran at them," and catching another man

tore him to pieces likewise. Meanwhile those on board, seeing the conflict, made all haste to assist their comrades, and finally vanquished the bear, whose skin they carried to Holland.

For some days the voyagers made vain attempts to go on, but the ice again and again drove them back. The case seemed hopeless, and after waiting till the middle of September without any improvement taking place, the expedition, fairly baffled, returned to Europe.

But the Dutchmen were not disheartened, and in 1596 two more ships, commanded by Jacob Hendrikson and John Cornelison, with Barents as general pilot and navigator, set out to make another attempt to discover the North-East Passage. After passing the North Cape heavy ice gave a great deal of trouble, and on the eighth of June, coming to "so great a heap of ice that they could not sail through it," they changed their course and reached an island, hitherto unknown, in about 74° 30′ north latitude. Here they stopped for a day or two, and while at anchor these adventurous seamen, seeing a bear in the distance, gave chase in one of the boats, intending to put a rope round Bruin's neck, and so catch him alive. But on nearer approach the size of their intended prey alarmed them, and they went back to the ship for more men and arms.

The Dutchmen's method of hunting appears to have been singularly unsuccessful, for after two boats' crews, armed with every description of offensive

MATERIALS FOR THE HOUSE.

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weapon, had engaged that bear for a couple of hours, he swam off with an axe which one of the men had stuck deep into his back. The boats followed, and after some further hacking, a blow, more effective than the others, split Bruin's skull. In honour of this remarkable chase the island near which it took place was called Bear Island.

After this adventure the explorers sailed northwards, discovered the islands now known as Spitzbergen, and then returned to Bear Island. Here they parted company, and while Cornelison returned to Spitzbergen, Barents' ship proceeded to Novaia Zemlia, where she arrived about the end of July.

August was spent partly in waiting for the ice to clear away, and partly in the exploration of Novaia Zemlia, the northern extremity of which was successfully rounded. Here a deadlock occurred. The ice would not allow the ship either to proceed or to go back, and more than once she was severely nipped. At last the rudder was smashed, and unable to contend against such a series of misfortunes, the explorers decided to pass the winter where they were. In a few days the ship was firmly frozen in, and the Dutchmen, having selected a suitable spot, set to work to build a house of the driftwood which bestrewed the shore. Shortly after the work was begun the carpenter died; but sixteen men still remained, and though one or two were seriously ill, building operations went on apace.

Before the work was finished stormy weather, with intense cold, set in, and for some days confined Barents and his companions to the ship. This caused some delay; but in time the weather moderated, and about the end of October the crew began to remove to their new quarters. Bears abounded in the locality, and their visits caused a good deal of alarm, though the intruders were always driven away or killed. When the sun sank below the horizon the bears took their departure, and were seen no more until daylight returned, though foxes were constant visitors during the winter, and a good many were killed and eaten.

Hitherto no western Europeans had attempted to winter so far north; but the Dutchmen pluckily made the best of everything, and the surgeon ingeniously constructed a sort of vapour bath which gave universal satisfaction. Very often, during the severest cold, the men were unable to go out for days at a stretch; and sometimes, when more snow than usual had fallen, they were completely snowed up, and could only leave the house by the chimney. Badly ventilated as the dwelling was, it was terribly cold, but an ill-advised attempt to warm it, by means of a coal fire, nearly resulted in the asphyxiation of the whole party.

Cold, darkness, and hardship, had their effect on the men: one poor fellow died during the winter, and when the sun returned he shone upon a sadly weakened party. To make matters worse, early in May provisions began to run short; but the weather was

SETTING FOX-TRAPS.

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improving, and Barents suggested that, if by the end of the month the ship was not afloat, they should attempt to retreat in boats. Preparations were accordingly made; and in the middle of June, as the ship was still immovable, the explorers embarked in open boats. All were now very weak; and Barents and another man were so ill that, after enduring the hardships of the boat journey for about a week, they both died on the same day. The death of Barents deprived the party of the only man who knew how to pilot the boats through the ice; but being thrown on their own resources, they made their way as well as they could along the coast.

Scurvy had broken out, and a fourth man died in July; but still the survivors pushed on, though their weakness increased so much that they were almost unable to work. Plenty of bear-meat could have been procured, but no one dared to touch it, for once or twice when an attempt had been made to eat the liver, those who partook of it became ill. Fortunately, sundry birds and a number of eggs were obtained from time to time, and these just kept the explorers going. But dark as their prospects appeared, their worst troubles were almost at an end, for at St. Lawrence Bay, on the south coast of Novaia Zemlia, they fell in with a party of Russian hunters who fed them and gave them a most friendly welcome. Thus, strengthened and encouraged, they went on to Kola, where, to their great surprise and joy, they found

Cornelison and his ship. All that now remained to be done was to return to Holland, and a few weeks later they anchored in the Maas.

During the seventeenth century, several expeditions were sent out from England and Holland, but none of them managed to improve much on Barents' work. But exploration was not at a standstill, for having conquered West Siberia in 1580, the Russians penetrated farther and farther into the country. Bands of hunters and traders, starting from the interior, made their way northward; and thus, bit by bit, the greater part of the Arctic coast line was traced.

Towards the middle of the eighteenth century, an immense scientific expedition was sent out from Russia to make a general examination of Siberia and its coasts. To save time and facilitate operations, the expedition was divided into sections, one of which traced the coast from Archangel to the Ob, and another, starting from Tobolsk, continued the exploration to the Yenisei.

A third party started from Yakutsk, on the Lena, to explore the coast westward to the Yenisei. Fate, however, was not propitious, for, before the vessel rounded the most northern point of Asia, heavy ice drove her back towards the Olenek River, where the leader, Lieutenant Prontschischev, breathed his last. The command now devolved upon Mate Chelyuskin, and, after wintering at the mouth of the Olenek, the expedition returned to Yakutsk.

RESCUE OF THE SURVIVORS OF THE BARENTS EXPEDITION.

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Another expedition, in which Chelyuskin also took part, was sent out in 1739. This time Cape Thaddeus was safely reached; but here ice again caused an obstruction, and Lieutenant Chariton Laptev, the officer in charge, went into winter-quarters at Khatanga Bay. In spring sledging work began, and a large party crossed the tundra to the Taimur River, whence they followed the shore westward until scarcity of provisions compelled them to go back to the ship. Laptev then endeavoured to return to the Lena, but on the way the vessel was caught and severely nipped by the ice. Despairing of safety on board, the men scrambled ashore and began to land their provisions; but, before they had secured everything, the ice broke up and drifted away, carrying the vessel with it.

Having lost their ship, the explorers set out for their former winter-quarters; but the cold was intense, and for twenty-five days they had to live as best they could, even a hot meal being an unattainable luxury. Twelve men died from cold, so, rather than travel farther, the party camped. Things now went on better than might have been expected, for they got through the winter so successfully, that, in the spring, they were in a condition to undertake further exploring work with sledges. Some of the men went direct to the Yenisei, and the others divided into three parties and surveyed the greater part of the coast of the Taimur Peninsula. When the explorers reassembled and compared notes, it was found that no one had

visited the most northern point of Asia; and Chelyuskin, determined not to be beaten, in 1742 once more set out with his sledges, and this time reached the cape now called by his name.

Eastward of the Lena, part of the coast was surveyed by Lieutenant Lassinius. He was succeeded by Lieutenant Dmitri Laptev, who, after much difficulty, managed to push his ship as far as the mouth of the Kolyma River; but being persuaded of the impossibility of going farther east by sea, he continued the journey overland, and eventually made his way to the Anadyr.

## CHAPTER II.

### EASTWARD TO CAPE CHELYUSKIN.

THOUGH the various expeditions undertaken in the sixteenth, seventeenth, and eighteenth centuries had resulted in the practical exploration of the whole Arctic coast of Eurasia, the North-East Passage still remained an unaccomplished fact. For commercial purposes no one now expected any great things of it, but scientifically and geographically it was of great importance; and in 1876 the Swedish explorer, Professor Nils Adolf Nordenskiöld, having received a large sum of money to fit out a Polar exploring expedition, laid the matter before King Oscar, who at once expressed a warm interest in the proposed journey. The royal interest was not limited to words, for the king not only promised a liberal subscription, but inaugurated the project at a dinner, to which he invited as many scientific people and Arctic explorers as could conveniently be gathered together. The result was most satisfactory, for when Nordenskiöld had explained his plans, the king declared himself fully convinced of the possibility of

reaching Behring Strait by way of the Polar Sea. Others followed suit, and the necessary funds were at once guaranteed.

Nordenskiöld had, therefore, nothing to do but to prepare for his expedition and select his staff, which included Dr. Kjellman, Dr. Stuxberg and Lieutenant Nordquist, zoologists; Dr. Almquist, surgeon; Lieutenant Hovgaard, meteorologist; Lieutenant Bove of the Italian navy, hydrographer. Besides this scientific staff, Captain Palander of the Swedish navy offered his services as captain of the ship, and Lieutenant Brusewitz sailed as first lieutenant.

As the expedition was, more or less, a private enterprise, Nordenskiöld had to provide himself with a ship. Having purchased the steamer *Vega*, he received permission to have her thoroughly overhauled and fitted up for the voyage in the naval dockyard at Karlskrona. He also obtained naval pay for the officers and men of the expedition; but, liberal as the minister of marine had shown himself, he drew the line at allowing the *Vega* to sail under the royal flag, and she was therefore entered in the Swedish Yacht Club. She was to be accompanied during part of her voyage by three smaller vessels, one of which, the *Lena*, was to act as tender, and go as far as the Lena Delta. Two other vessels, the property of a wealthy merchant, were bound on a trading voyage to the Yenisei, whence they were to bring back a cargo of grain.

All these preliminaries having been arranged, Nordenskiöld employed himself in the selection of a varied assortment of provisions in which the old-fashioned, scurvy-producing salt meat was replaced by preserved meats and vegetables, pemmican, potatoes, and other edibles. Cranberry juice and cloudberries from Finmark were substituted for the usual lime-juice.

On June 22, 1878, the *Vega* steamed out of Karlskrona harbour, and, having called at Copenhagen and Gothenburg to take in stores, she proceeded to Tromsöe, where Nordenskiöld went on board, the supply of coal and water was made up, and reindeer-skin clothing and sundry other comforts were added to the already extensive equipment. Everything was now ready, and on the twenty-first of July, amid the cheers of an admiring crowd which had gathered to see her start, the *Vega* set out in earnest on her long and adventurous voyage. The first part of her course inside the chain of islands which fringes the Norwegian coast was easy enough, and she soon arrived at Masö, near the North Cape, where the explorers intended merely to post letters. Contrary winds, however, decided otherwise; but as, after three days' delay, the weather was still unfavourable, they decided to wait no longer, and, in company with the *Lena*, steered for Goose Land in Novaia Zemlia. At first the weather was very foggy, and before the vessels had gone far they parted company; but as this event had been foreseen, and a meeting-place arranged,

nobody felt much concerned. Otherwise fate was kind, for Barents Sea was clear of ice; and, after three days' steaming, the low shores of Goose Land were seen ahead.

Goose Land, a grassy plain, well studded with lakelets, is the haunt and breeding-place of numerous wild geese and swans. Any number could easily have been shot, but, owing to bad weather, so much time had already been lost that even the attraction of roast goose could not induce Nordenskiöld to sanction further delay. The geese, therefore, were left unmolested, and the *Vega* went on to Yugor Strait, where two of her consorts had already arrived and were awaiting her at Khabarova harbour. The *Lena* had not yet put in an appearance: since parting from the *Vega* she had been delayed by rough weather, but she was not far behind, and she dropped anchor alongside the others the day after the *Vega* arrived.

Khabarova was merely a Samoyed settlement to which, in the summer time, a few Russian merchants came to trade with the natives. The staple articles of commerce were, on the part of the Samoyeds, train-oil, feathers, and furs, and on the Russian side brandy and other European commodities. By no stretch of imagination could the place be considered lively; but even Khabarova had its "West End," which, though it only consists of a few wooden houses roofed with turf and a small, shed-like church of dilapidated appearance, contrasts favourably with the poorer quarter,

KHABAROVA.

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where the Samoyeds pitch their uninviting-looking tents. In spite of its poverty-stricken appearance, the little church contained several fine pictures, before which numerous lamps and candles were burning; but here the ornamentation ended, for outside the building several votive crosses, in various stages of dilapidation, increased rather than diminished the generally squalid aspect of the place.

It appeared that the Russians, who all came from the town of Pustosersk on the Petchora River, usually arrived at Khabarova about the end of May, and remained until the beginning of October, employing themselves in reindeer keeping and whale fishing, as well as in trading with the natives. The pictures in the tumble-down church were their property, and were brought with them on their sledges. The Samoyeds were also professedly Christians, but their Christianity was flavoured with such a strong spice of heathenism that it was not easy to disentangle the two. A suitable equivalent, backed by a good deal of argument, induced one old woman to hand over to Nordenskiöld her *bolvans* or household gods, which she extracted from the recesses of an old boot, where, for safe keeping, they usually resided. These objects of Samoyed veneration were far from being awe-inspiring to a western mind, and though the natives credited them with more or less supernatural power, it was evident that they were halting between two opinions as to the respective claims of the bolvans

and the Christian religion. On the whole, Christianity seemed to be at rather a low ebb, for the children of the north had no sort of marriage ceremony, and one man might have several wives. Contrary, however, to the usual custom in polygamous countries, the women were treated in all respects as the equals of the men.

Not content with the bolvans obtained from the old woman, Nordenskiöld had a great wish to visit one of the holy places for which Waigatz Island is celebrated. The difficulty was to find a conductor, as he did not think it advisable to mention the scheme to the Samoyeds, and for some time none of the Russians would accompany him. At last a young man consented to act as guide, and Nordenskiöld, Almquist, and one or two others, set out in one of the steam launches for Waigatz Island.

The Russian led them to a grassy, flower-besprinkled headland in the south-west of the island. Here, on the top of a mound, was a pile of stones which obviously did duty for an altar, for among the stones were scattered the paws and head of a recently-killed bear, sundry scraps of iron, and a variety of bones. The effect of these grisly decorations was heightened by numerous reindeer skulls, some set up on carved sticks, and others arranged so as to present the appearance of a small forest of antlers. The divinities, for whose delectation this array was prepared, were represented by bolvans in the form of

rudely-carved sticks, hundreds of which were stuck into the ground a little way from the altar.

Having carefully inspected and sketched this primitive shrine, the explorers ventured judiciously to abstract a few bones and even one or two of the bolvans. At this sacrilegious act the Russian looked rather uncomfortable—apparently he was not quite sure how far the power of these redoubtable deities might extend; but his scruples disappeared when Nordenskiöld placed a couple of coins on the stones. The atonement appeared to be satisfactory all round, for when the Samoyeds discovered the desecration they took the matter very quietly, merely asserting that the vengeance of the offended bolvans would sooner or later descend on the guide.

On the first of August the *Vega*, with her three attendant vessels, left Khabarova. Yugor Strait, on this occasion, was entirely free from ice, but progress was slow, for a good deal of time was spent in dredging for botanical and zoological specimens, and, moreover, one of the convoy, a sailing vessel, had to be towed, as there was little or no wind. But even with these delays a few hours sufficed for the passage of the strait, and the expedition triumphantly entered the Kara Sea, where so many previous navigators had come to grief.

Fortune this time smiled on the explorers. Very little ice was to be seen, and even the weather was more propitious than is usual in that foggy locality.

The opportunity was too good to be wasted, so, while the *Vega* with the two trading vessels pursued her way to Port Dickson, the *Lena*, with Almquist, Hovgaard, and Nordquist on board, made a trip to White Island. Meanwhile the three vessels proceeded cautiously, for the coast was very imperfectly charted, and the water in many places was so shallow that Captain Palander, after entering the Gulf of Yenisei, went ahead in the steam launch to act as pilot. This arrangement led to most satisfactory results, for not only did the ships reach their anchorage without disaster, but on the way Palander contrived to bag a bear and a reindeer.

The day after the *Vega* arrived in port the *Lena* steamed in with Almquist and his companions on board. They had had a pleasant and fairly satisfactory trip to White Island, though in order to land they had had to leave their boats about three hundred yards from the beach and wade ashore. The island was not particularly interesting; it was very low, and was composed entirely of fine sand, overgrown in favourable places with mosses and lichens, interspersed with a few scattered tufts of grass and flowers, though the only parts which could be called green were the bogs and the marshy borders of sundry small lakes. Scanty as was the vegetation, it sufficed for the needs of numerous reindeer; but, though several herds of these animals were seen, the explorers could not get near them. On the whole the island presented few

attractions; and not caring to make a longer stay, Almquist and his comrades returned to their vessel, and crossed the strait which separates White Island from the Yalmal Peninsula. Some Samoyed tents were visible a little way inland, and the explorers would gladly have paid them a visit, but the water was so shallow that to do this would have entailed wading a longer distance than they considered agreeable. They therefore rowed along the coast until they found a more convenient landing-place, where they went ashore, and starting inland soon found themselves on a green and decidedly damp tundra. They hoped to reach the Samoyed settlement, but an unfordable river soon forced them to turn back, and as the time at their disposal would not admit of their finding another landing-place, they were forced to return on board without effecting their object.

After two or three days' stay at Port Dickson the vessels prepared for departure. The traders went up the river to get their cargo, while the *Vega* and the *Lena* pursued their way eastward. The sea was still pretty clear of ice, but Captain Palander soon found that it behoved him to proceed carefully, for his charts were very far from reliable, and numerous islands existed where none were marked on the maps. The usual fog prevented the explorers from obtaining any view, and after proceeding for some miles the captain decided to lie to until the weather cleared. The *Vega*, accordingly, was anchored near one of the

numerous islands, and Nordenskiöld, Kjellman, and several others went ashore; but they found little to reward them for their trouble, for the island consisted chiefly of gneiss rock, dotted here and there with lichens, mosses, and flowering plants, though, judging by the position of sundry pieces of drift-wood, it appeared that a great part of the island was sometimes overflowed by the tide. A few birds were seen, but no quadrupeds of any description, and the explorers were by no means sorry when the mist cleared off and enabled them to leave this desolate spot. Hitherto but little ice had been encountered, but now, though there was no heavy pack, drifting floes, which the ships easily avoided, were frequently seen. The water was very clear, and in some places numerous fish were visible playing about around the stranded floe-bergs. At one place the bottom of the sea was covered with dead fish, killed, as Nordenskiöld supposed, by being frozen into a pool so small that they exhausted all the oxygen in the water, and were drowned, just as land animals would have been under similar circumstances.

For several days after this the vessels continued to make their way along the coast, past innumerable islands, many of which were mere rocks. It was by no means a place in which to sail incautiously, more especially as there was still a good deal of drift-ice floating about, and, as fog still prevailed, Palander several times was forced to anchor; but by taking

advantage of every opportunity, little by little the *Vega* and her attendant boat made their way onward, and on the fourteenth of August they reached a large bay on the west of Taimur Island. Here fog again stopped them, but, that no time might be lost, Nordenskiöld set the dredge to work, and obtained such a quantity of actinia that, in the absence of a better title, the bay was named Actinia Bay.

As the weather continued unfavourable for some days, several excursions were made in the neighbourhood, but nothing of a very interesting description was discovered. At length the fog lifted, and the vessels continued their voyage through almost open water, only here and there encountering a floe of insignificant dimensions. In fact, Nordenskiöld observed that all the ice along this part of the Siberian coast was much lighter than that which he had seen in the neighbourhood of Spitzbergen. Cape Chelyuskin was now not far distant, and on the evening of the nineteenth of August the two vessels triumphantly steamed round the promontory. At last the most northerly point of the Old World had been rounded, and in honour of the occasion flags were hoisted and a salute was fired, to the evident disgust of a bear who was keeping guard at the end of the promontory. A hunting party was at once arranged, but before the boat reached the shore Bruin discreetly made tracks for the interior, and remained in seclusion until the intruders vacated his domain.

## CHAPTER III.

### HALT!

HAVING successfully rounded Cape Chelyuskin, Nordenskiöld wished to take the shortest possible course to the New Siberian Islands. Whether between these two points there was or was not open sea was a moot point, and it was with the view of settling the question that Nordenskiöld desired to steer due east. For a couple of days the two vessels pursued their course through the ice, but they soon found that the pack was too much for them, and further, the fog was so thick that it was impossible to see far ahead, so as to discover the extent of the ice-fields. To go on under such circumstances seemed sheer foolhardiness, and after once or twice waiting for the weather to clear, the explorers gave up their original project, and turned their course southward, in the hope of reaching open water near the mainland.

The ice now began to give a good deal of trouble, and, as the *Vega* did not possess particularly strong engines, she was less able than could have been wished to force her way through the pack. Good seamanship

and careful navigation, however, more than atoned for the deficiency of steam power, and in the course of a day or two the ships freed themselves from the pack, and sailed along the coast in full view of a mountain range which lay at some distance inland. The water was now quite clear of ice, and, much to the excitement of would-be hunters, a number of walrus appeared in sight. But there was no time to go in pursuit, and the same evening the *Vega* reached Preobraschenie Island, where she anchored for a few hours to allow Nordenskiöld and his companions to land and inspect the local productions—animal, vegetable, and mineral.

It had originally been Nordenskiöld's intention that the *Lena* should accompany the *Vega* as far as the Lena River, but after passing the mouth of the Olenek, he came to the conclusion that the little vessel would have a better chance of making a prosperous homeward voyage if she returned at once. On the night of the twenty-seventh of August, therefore, Captain Johannesen came on board the *Vega* for final orders, and then the two vessels parted company and went on their several ways, the *Vega* directing her course to the New Siberian Islands. On the thirtieth of August, Liakhov Island was reached. Nordenskiöld had intended to land here, and spend a few days ashore searching for fossil ivory, mammoths, and any other objects of interest which might present themselves. Nowhere on earth, perhaps, is there a

richer natural museum of prehistoric remains than is to be found in the New Siberian Archipelago, and the explorers promised themselves a rare treat; but prudence counselled a different course, for the shallow water around the islands offered no safe anchorage. Moreover, navigation would soon have closed for the season, and as the object of the expedition was not to winter in the ice, but to find the North-East Passage and circumnavigate Eurasia, the visit to the island was postponed to a more favourable opportunity, and the *Vega* went on to Bear Island, where the only living things to be seen were a few seals and birds. Shortly after passing the islands, heavy ice was encountered; but, though inconvenient, it was not impassable, and, cautiously feeling his way through it, Palander managed to take his vessel safely into an open channel which bordered the shore.

By this time the explorers no longer enjoyed continual daylight, and the nights were so dark that Palander every evening lay to until returning daylight enabled him to see and avoid the floes and shoals which rendered navigation dangerous. This made progress slow, and the daily course of life was beginning to get rather monotonous, when one evening a couple of skin boats, full of men, women, and children, were seen coming off from the shore. They were evidently making for the ship, so the engine was stopped, and in a few minutes crowds of chattering natives—bare-headed, but otherwise warmly clothed

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in skins—scrambled up the sides. It was clear that the *Vega* was by no means the first vessel they had seen, and they began talking away at a great rate, while the Swedes were far from backward in the use of their tongues. The conversation at first bade fair to be rather barren of result, as neither party could understand a word said by the other. But pipes and tobacco formed a common basis of understanding, and the natives were greatly delighted with the presents which they received.

These people belonged to a little-known tribe who called themselves Chukches. Though living in Russian territory, they seemed to know very little of either the Russians or their language; but one boy could count up to ten in good English, an accomplishment probably learned from an American whaler. Neither men nor women were bad-looking, though, to European taste, sundry tattooed lines on the women's faces did not add to their beauty.

The amenities soon came to a conclusion, for, while the Chukches did not apparently desire to make a long visit, the explorers were in a hurry, and in a short time the *Vega* was once more under way, and the natives returned to their homes. A few hours after this meeting with the Chukches the ship was again stopped by ice, and, having been made fast to a large floe, she became the centre of attraction to the inhabitants of the neighbourhood, who not only came in force to visit her, but invited the explorers to

return the call—an invitation which Nordenskiöld and his companions were delighted to accept. The Chukch village, they found, consisted of fairly comfortable habitations constructed of reindeer skins, with an inner chamber which served as a bedroom for the family and their visitors—the whole being comfortably warmed with train-oil lamps. Except for an occasional fire in the outer tent, the Chukches never, if they could help it, used wood as fuel. A more hospitable reception would have been difficult to imagine, and the visitors were made free to the tents and all that they contained. Seal-meat and reindeer-meat were plentiful, while an abundant supply of train-oil, stored in skin sacks, occupied the walls of some of the tents. The settlement was evidently a thriving place, and the numerous children who ran about, mostly without clothing, all seemed healthy and well-fed.

After waiting a day or two for the ice, the travellers endeavoured to proceed, but the fog soon stopped them, and for other twenty-four hours they remained stationary, much to the joy of the natives, who, though no huts were to be seen in the neighbourhood, continued to arrive in troops. They were quite ready to barter such articles as they had for European goods; but, unfortunately, Nordenskiöld had taken very few articles for barter, and coin of the realm had no value for these children of nature. A brass button was infinitely more admired than a gold coin, and

silver money was only appreciated when converted into ear-rings. Tobacco and pipes formed, if not a universal, at all events an acceptable currency, and Nordenskiöld expended these so liberally that he was soon left bankrupt.

From this time forward the ice became more and more troublesome. Moreover, the necessity of lying to at night wasted a good deal of valuable time; and on the twelfth of September, shortly after passing Cape North, a close pack stopped the vessel altogether. This neighbourhood was originally inhabited by a tribe called Onkilon, who, hundreds of years ago, were, it is said, driven out by the Chukches, and compelled to take refuge on some islands in the far north. The remains of their houses were still to be seen, and some excavations undertaken by Almquist and Nordquist resulted in the discovery of a variety of bones, stone and bone implements, and walrus tusks worked up into spear heads. These ruined dwellings were utilized by the Chukches as blubber storehouses, and consequently, until they discovered that the white men had no hankering for blubber, Almquist's investigations were not very pleasing to them.

During the week which the explorers perforce spent at Cape North, they saw a good deal of the Chukches, who certainly were a peculiar people. They seemed to have no government whatever; but, though they did not own any one as chief, the greatest order prevailed in the settlement. Men and women—as among the

Samoyeds—stood on an equal footing, and no husband would dream of transacting any business without first asking the advice of his wife. The children, also, had a position of their own, and friendliness towards them was a sure passport to the good graces of their parents.

After waiting with what patience he might for nearly a week, Nordenskiöld ascended a neighbouring hill in order to get a view of the sea, or, rather, of the pack-ice which covered it. The outlook was not encouraging; but, as there seemed to be no prospect of improvement, steam was got up, and the *Vega* pushed on through a narrow channel near the coast, where ice and shoal water combined to delay her as much as possible. This went on for about a week, and on the twenty-seventh of September she was brought to a standstill in a long, fjord-like opening known as Koliutchin Bay. On the eastern side of the bay the pack so nearly touched the land that the possibility of further advance was doubtful. Hovgaard went in the launch to reconnoitre, and, as he reported favourably, the next day the *Vega* proceeded; but, after steaming cautiously along for an hour or two, she got into shallow water, where she was in the greatest danger of running aground. To go on was to court disaster, and to force a way into the pack was impossible, so the explorers anchored the *Vega* to a grounded floe-berg, hoping that a few hours might see them once more on their way towards Behring Strait, now only a few miles distant.

But hours lengthened into days, and, though the ship was moved from her first anchorage to a slightly improved position, any advance was out of the question. To make matters worse, new ice began to form; and, though the appearance of the sky indicated that there was still open water at no great distance, the way to it was blocked by an impassable belt of heavy ice. It was no use to fret over what could not be helped, so the crew made the best of things as they were; and, the new ice being in splendid condition, the skaters held high festival, and enjoyed themselves amazingly.

Meanwhile the Chukches of the neighbourhood were very busy. The ice was at a stage most suitable to their method of fishing, which was a decidedly unusual one. A man and woman generally worked together; and having cut a suitable hole in the ice, the man kept the aperture clear, while the woman uttered a peculiar kind of cry supposed to be particularly agreeable to the fish. As soon as one appeared, a bone or copper hook, baited with fish, was dropped temptingly into the water, or a stick with a crooked end was used as a spear; but whatever the method, the anglers seldom failed to land their prey.

One day a sledge, drawn by men, was seen approaching the ship. It was occupied by a man whom the travellers at first believed to be an invalid; but when the equipage came alongside, the supposed sick

man proved to be Wassili Menka, the "starosti" of the reindeer Chukches, who had come in state to pay his respects to the new arrivals. Though not of imposing appearance, he had a high opinion of himself; and when invited into the gun-room and plied with questions, he answered amiably in very indifferent Russian. He was an intelligent fellow, and though unable to read or write, seemed quite at home with a map. In a few days, he said, he should be going to Markova, a Russian settlement on the Anadyr; so, though the explorers had not yet given up hope that the ice would break up, they took this opportunity of sending home news of the progress of the expedition. A letter, written in Russian, was accordingly prepared and addressed to the governor of Irkutsk; and this, with several private letters, was packed between a couple of boards and handed over to Menka, who appeared to consider his personal dignity augmented by the temporary possession of the document.

A couple of days later Nordquist and Hovgaard, each comfortably seated in a dog-sledge with a Chukch driver apiece, set out to return Menka's visit. The journey to the encampment took about twenty-one hours, and during the whole of this time Menka's attendant ran before the sledges to show the dogs the route; and while the others rested, this tireless being filled up his time tending the dogs or performing any other miscellaneous duties which suggested

themselves to his active mind. He never wanted to sleep, and his principal refreshment on the road seemed to be chewing tobacco. The dogs appeared equally hardy, for, so far as Nordquist and his companions could see, they were never fed or unharnessed, but when the party camped they lay down in the snow and slept by the side of their sledges.

The way lay over a marshy, undulating tundra, mostly covered with snow, through which a good many plants still showed themselves, apparently little the worse for the cold. On arriving at the camp the principal men came out to shake hands with the guests, who throughout their visit were treated with the utmost hospitality. The dwellings themselves were merely tents, but some of the domestic utensils were of American or European make; and Nordquist noticed, among other things, knives and axes, coffee-pots and teacups, flat wooden trays, and a German silver drinking-cup, on which some English words were engraved. In dress, habits, and appearance generally, these people greatly resembled the tribe previously visited; but whereas they were "dog Chukches," Menka's tribe were "reindeer Chukches;" and while the former clothed themselves impartially in seal-skin or reindeer-skin, the "reindeer Chukches" confined themselves to the latter material, though a few owned cloth blouses, which were reserved for high days and holidays. Like the Greenland Eskimos, the Chukches saw no necessity for wearing clothes in the warm

inner chamber of their tents; but, unlike the Eskimos, they objected to eating raw meat, and usually cooked their food. But interesting and uncommon as Chukch usages undoubtedly were, neither of the explorers was disposed to pay a long visit, and after staying one day they returned to the *Vega*.

There was clearly no chance of release that autumn, so all hands set to work to convert the imprisoned ship into comfortable winter-quarters. The deck was partially housed in with a tent, open at one end for the admission of air, and the sides and the deck itself were covered with a thick coating of snow. This housed-in deck proved useful in more ways than one, for it accommodated the forge, and served as a promenade for the ship's company, and a reception room for the Chukches, who, with their dogs, were constant visitors during the winter. The final touch was given to the arrangements by the erection of an ice staircase, to serve as a means of communication with the outer world. This, when finished, was quite a handsome affair, and reflected the greatest credit on the architect and his assistants.

## CHAPTER IV.

### THE FEAT ACCOMPLISHED.

THE position occupied by the *Vega* was far from being a safe one. The ice was frequently in motion, and, as the ship was almost unprotected, it was obvious that a sudden nip might send her to the bottom. Should this occur, the crew would probably have little difficulty in reaching the shore themselves; but to fetch up and land stores at a few minutes' notice would be another matter altogether, and to guard against this risk a depôt was established on the beach. Its only protection was a covering of sails, but though the Chukches knew that it contained stores of food, clothing, guns, ammunition—all, in fact, that they most desired to possess—they never attempted to help themselves. They were a curious mixture of honesty and dishonesty, for though the depôt and its contents were held sacred, if they saw their way to cheat in a bargain they made a point of doing so.

As soon as the expedition was fairly settled in winter-quarters, the scientific staff set to work to construct a magnetic observatory. The site chosen

was about a mile from the vessel, and, lest the observers should miss their way when walking backwards and forwards in the dark, some one ingeniously marked out the track with blocks of ice, along which a rope was fastened. In many respects the observatory answered its purpose splendidly; but, as it was built entirely of ice, during the winter it was horribly cold, and all attempts to warm it failed ignominiously. Iron was inadmissible on account of the instruments, but the half-frozen scientists fixed up a copper stove, and in a sanguine moment kindled a fire. It burned up beautifully; but as they were congratulating themselves on the success of the plan, an ominous drip, drip, made itself heard, and the unlucky men found that they must choose between a fire and an observatory, for the one would certainly melt the other. The stove clearly would not do, so an attempt was made to use the native lamps, which burned train-oil, but the principal result was the partial suffocation of the observers and the covering of their property and the walls with a thick coating of soot. No further effort was made to warm the observatory; the oil was given to the Chukches, and its original owners thenceforth kept themselves warm as they best could.

The ship itself was easily kept at a comfortable temperature; in fact, the large stoves which warmed it not infrequently gave out too much heat. Very warm clothing was therefore unnecessary on board;

but, in addition to their usual winter garments, the men were supplied with plenty of extra thick woollen underclothes. For outdoor use a many-pocketed sailcloth blouse was worn over the ordinary dress, and was found to be such an effective protection against wind and snow that fur clothing was rarely used except when sledging. Leather-soled canvas boots, thick stockings, felt foot-wrappers, woollen caps and hoods, and fur gloves completed the outfit.

The neighbourhood of the *Vega's* winter-quarters could not by any stretch of imagination be called attractive. It had been inhabited for ages by Chukches, and the ground was strewn with bones and refuse of every description. There was not even much game to be found: the bear tribe was conspicuously absent, but wolves and foxes were fairly plentiful, and the hunters succeeded in obtaining some ptarmigan and hares. No doubt there were seals around the coast, but these never appeared within a reasonable distance, and consequently none were captured. Fish were more abundant, and though the Swedes did not catch many themselves, they obtained a good supply from the natives, chiefly of a species of cod of good flavour, but of dubious appearance, for, when cooked, the bones were greyish-green, a freak of nature to which some of the men could not reconcile themselves for a long time.

While light permitted, the hunters were constantly out in search of game for winter use. Few adven-

tures befell them; but one day a man named Johnsen brought back a wonderful tale of a murdered man, whose body he had found lying on the tundra at a little distance from the ship. Some steps—he was not prepared to say what—should be taken, he thought, to trace and punish the murderer; and to aid in this design he had brought away sundry weapons and implements, including a beautifully-wrought lance, which he had found lying near the dead man. Fortunately for himself he had managed to carry these articles past the Chukch camp without being observed, or serious consequences might have followed his well-meant interference. After hearing his story, however, Nordenskiöld felt pretty certain that no murder had been committed, but that the corpse had merely been laid on the tundra along with the weapons and implements in accordance with the Chukch idea of a properly-conducted funeral; but to make sure, he asked Dr. Almquist to visit the spot. Almquist's view entirely coincided with that of his leader; but as the corpse had already suffered considerable detriment from the attentions of wolves, foxes, and ravens, the doctor, ever mindful of the scientific purpose of the expedition, brought home with him the head of the dead Chukch. On arriving at the ship he attached his prize to a line and lowered it to the bottom of the sea, where, in the course of a week or two, the crustaceans cleared off every vestige of flesh. This was exactly what Almquist desired;

and the skull, thus cleaned, was then added to the museum.

None of the natives understood any language known to the explorers, and communication in consequence was at first extremely difficult. Nordquist undertook to act as interpreter; and, to qualify himself for the post, he began to study the Chukch language, with so much success that in a week or two he was able to converse fairly well. Chukch notions of politeness, however, somewhat impeded his studies. It was considered ungracious to correct a stranger's pronunciation or grammar; and, rather than seem to do this, when conversing with the Swedes the natives adopted the mistakes made by them—an excess of politeness hardly to be expected of utterly untaught heathens, whose ideas of religion, so far as could be discovered, were confined to a belief in charms and amulets of a most elementary description.

As the winter advanced, everybody on board settled down into a regular routine of work. The scientific observations were carried on with unvarying regularity night and day, and meals and other domestic arrangements followed one another very much as they would have done in an ordinary house. Breakfast was served about eight in the morning, and after the meal the officers generally went on deck for a pipe and a few minutes' fresh air and exercise. By this time the Chukches with their dogs and sledges were

arriving in force to pay their daily visit, and having saluted most of the officers by names more or less mutilated, according to the difficulty of pronunciation, they usually proceeded to beg for food, as an equivalent for which they offered all sorts of articles, such as weapons, furs, and zoological or botanical curiosities. The market, if it could so be called, was held on deck; and after business was over, the ship's company went off to their several occupations, which kept them employed on board or in the observatories until mid-day, when, as a rule, they again assembled on deck. The scene now was lively enough, for a crowd of Chukches usually surrounded the entrance to the companion, up which basins of soup, bread, meat, and sugar were handed to them. It mattered little what the food might be; everything was voraciously devoured, and sometimes a general scramble ensued as everybody tried to possess himself of a little more than had fallen to the share of his neighbour. In the course of the afternoon the natives took their departure, and at six o'clock work, with the exception of the regular scientific observations, was put aside, and the rest of the evening passed in such recreations as individual fancy dictated.

Time passed quietly enough until Christmas, when the crew of the *Vega* held high festival in true Swedish style. The Christmas-tree, dear to the Scandinavian heart, was unfortunately lacking; but Kjellman induced the Chukches to bring him a number of willow

bushes, and from these, a big stem of drift-wood, and plenty of coloured paper, he and one or two others ingeniously evolved a very fair substitute for the absent tree. In the evening a grand Christmas feast was held, followed by songs and toasts and general rejoicings.

Early in January southerly winds caused the ice to open, and the Chukches declared that it would soon break up altogether. This was encouraging; but in a day or two the wind changed, and instead of breaking up, the ice became thicker and firmer than ever. For the first time that winter the temperature sank below the freezing-point of mercury, and the openings that had appeared in the ice, and even the blue "water sky" in the distance, were seen no more for a time. Daylight was now returning, but throughout the winter the darkness had been less intense than that experienced by other expeditions which were farther to the north; the aurora had been seen daily, though it was not vivid enough to make any material difference in the light.

The intense cold at the end of January did not last long, and the warmer weather which followed it enabled the Chukches, who for some time had been living on the charity of the Swedes, to replenish their own stock of food. A bear or two, numerous seals, and plenty of fish for a time put a stop to their daily begging; but they had no idea of economy, and as long as their provisions lasted they feasted royally

after their fashion. The return of frost, however, put a stop to hunting, and in a few days the crew were amused to see a long line of natives approaching the ship, each one carrying a small lump of ice, which he hoped to barter for something eatable.

Not long after this a Chukch came on board, carrying with him his dog, frozen perfectly stiff and apparently lifeless. They had lost their way the night before, and for lack of better shelter had slept in the snow, with disastrous results to the poor dog, though his master was able to eat a good breakfast, after which he lay down in a warm corner to sleep off his fatigue. Meanwhile some of the men examined the dog, and finding he was still alive, they set to work to bring him round. At first the case seemed almost hopeless, but several hours of patient rubbing worked wonders. Little by little the patient began to recover, and his master's surprise and delight were great when the dog, whom he had regarded as dead, was restored to him little, if any, the worse for his adventure.

The return of daylight was the signal for the Chukches to begin to move about, and numerous sledges, laden with goods for barter, passed the ship on their way to various Russian settlements. This was an opportunity not to be wasted; and Nordenskiöld, by a judicious expenditure of rum, induced some of the natives to take charge of a bundle of letters which he desired to send to Europe. They

faithfully executed their commission; and two or three months later, when they returned, they brought a note from the Russian official to whom they had handed the correspondence. Seeing that the natives held frequent intercourse with the Russians, it was curious that hardly any one could understand a word of Russian, but it seemed to be almost a point of honour with them that commercial transactions should be carried on in their own language.

The crew of the *Vega* also began now to move about. Tired of their long confinement within their own wooden walls, they made sundry excursions to the Chukch camps in the neighbourhood, and thus acquired a good deal of interesting information concerning the habits and manners of these little-known people. Go where they would, they were treated with the utmost friendliness; indeed, hospitality seemed to be one of the first canons of Chukch society, and was regarded as a matter of course, the entertainers of to-day knowing that they might be the guests of to-morrow. In most places the inner or bed-chamber served also as work-room and dining-room, and was usually fairly well lighted with stone lamps provided with moss wicks. These lamps required an immense amount of attention, and whenever their claims were neglected for half an hour they revenged themselves by going out altogether or by smoking inordinately. Most of the work, especially if it was of a disagreeable nature, was done by the older women; the young

ones, it was observed, took care not to tire themselves by very early rising, or by too much exercise during the day. The Chukches were voracious eaters; and Lieutenant Bove one evening saw seven grown-up people and one child dispose of about thirty pounds of fish and meat. The repast began with a quantity of raw fish, followed by thick, nasty-looking soup and boiled fish, after which came seal flesh and blubber.

Notwithstanding the promise of warm weather at the beginning of the year, in May it was almost as cold as ever, and up to the middle of June very little improvement had taken place. Then a sudden change occurred; up went the mercury, the snow began to disappear, and a fortnight later very few white patches were to be seen. Long before this time birds had begun to make their appearance; first came the snow-bunting at the end of April, and in a few days geese, long-tailed ducks, sundry song-birds, and a variety of gulls came flocking up from the south, greatly to the excitement of the sportsmen, who at once got out their guns. Except for the sake of sport, they need not have troubled themselves, for the natives daily brought in large numbers of birds of different kinds, some of them quite rare ones, for they quickly discovered that these incomprehensible foreigners would pay a bigger price for a small bird, if it happened to be uncommon, than they would for a big one which they could get every day.

About the end of May numerous "leads" began to

open in the ice, but there was still no immediate hope of getting free; and the explorers observed that the Chukches acted as though they did not expect the ice to break up for some time. One day a large boat of natives arrived, partly to claim hospitality, and partly to convey a letter from a Russian official who, having heard that the *Vega* had been beset in the ice, kindly sent to offer any assistance that might be required. The bearer of the letter signified his willingness to supply the explorers with a few reindeer; and Nordenskiöld willingly purchased three deer at the very reasonable price of a little tea, sugar, and tobacco. No assistance, however, was needed, and therefore none was claimed, though the explorers were duly grateful for the kind feelings which prompted the offer.

By this time the rapid melting of the snow made it difficult to get ashore, except in a semi-drenched condition; but Arctic explorers are soon divested of over-squeamishness, and notwithstanding the wet many pleasant excursions were made. One day a fishing expedition was got up, and, guided by the Chukches, the party made their way to a fresh-water lagoon, where an unknown black fish, said by the natives to be particularly good eating, was to be obtained in large numbers. The fishing, which was conducted by the Chukches in their own way, was most successful. A net was lowered into the water, and men and women, regardless of the icy coldness of the water,

stepped unconcernedly into the lagoon, the former pushing a net before them, while the latter, walking on each side, raised a most unearthly din, with the design of frightening the fish into the net. The method was doubtless primitive, but the effect was good, for hundreds of fish were captured. As the natives had said, they were slimy, black, nasty-looking things; but those who screwed up their courage to try them found them remarkably good eating.

A week or two afterwards a Chukch came in to say that he had found a mammoth's bones and tusks near his tent, which was at some distance from the *Vega's* anchorage. This sounded tempting, and as the excursion would only occupy five or six days, Nordenskiöld arranged to make the trip.

His first idea was to go by boat up a river formed by the summer floods; but, though the native had assured him that there would be plenty of water, after going a little way this was found to be a mistake. The river had fallen, and was now so low that it was little use as a water-way, even for a vessel of such small draught as a skin boat; and finding it useless to try to go on, the explorers returned to the ship to arrange some other means of transit. Before a second start could be made the ice suddenly broke up. The officers were at dinner; but Palander, feeling the vessel move, went on deck to see what had happened. He could scarcely believe his eyes: when he went below, ice was everywhere, and the

THE "VEGA" IN BEHRING SEA.

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*Vega* was gripped fast; but now she was afloat, and stretching away to the eastward was a long lane of open water. It seemed almost too good to be true.

Everything was ready for a start; the engines had been cleaned and oiled, and it was only necessary to get up steam. This was soon done, and an hour or two later the *Vega* left her winter-quarters, much to the grief of the Chukches, who assembled on the cliffs to see the last of their friends. The conduct of the ice was now all that could be desired, and without let or hindrance the *Vega* ploughed her way towards Behring Strait. She rounded Cape Serdze Kamen without difficulty, and the next day, in the narrowest part, her guns thundered out a victor's salute to the shores of the Old and New World.

The remainder of her voyage was easily and prosperously performed. There was no need for hurry, so the *Vega* took matters easily, and many pleasant visits were paid to lands very different from the dreary Chukch Peninsula; but all things have an ending, and on the twenty-fourth of April the explorers once more reached Stockholm. The heartiest of welcomes awaited them; where many had failed they had succeeded, and their countrymen were justly proud of the brave fellows who had won for Sweden the honour of discovering the North-East Passage.

## CHAPTER V.

### A NEW ROUTE.

IN the natural order of things the early Polar explorers all hailed from Europe, but since the middle of the nineteenth century almost as many Arctic expeditions have been sent from the United States as from England or Scandinavia. American ships joined in the search for Franklin; Kane and Hayes successively endeavoured to force their way northward by the Smith Sound route; and Hall, following in their steps, succeeded in penetrating as far as 82° 16′ north latitude, but was then obliged to retreat to his winter-quarters at the southern entrance of Robeson Channel. He himself died a few weeks later (November 8, 1871); but the crew, although they were forced to abandon their vessel and much of their property, contrived, after many adventures and hairbreadth escapes, to make their way home.

The story of their hardships roused the zeal of other adventurous spirits, and in 1873 Lieutenant George Washington de Long, of the United States navy, wrote to Mr. Bennett, the proprietor of the *New*

*York Herald*, offering to undertake the command of another expedition if Mr. Bennett would find the necessary funds. This, after some consideration, he agreed to do; but the matter hung fire for a time, and it was not until November 1876 that the two enthusiasts began to search, first in America and then in England, for a vessel which would serve their purpose. It was not easy to come across exactly what they wanted, but at last they opened negotiations with Sir Allen Young for the purchase of his Arctic yacht *Pandora*, and in the following year she became the property of Mr. Bennett.

No sooner was this business completed than Lieutenant De Long resigned his post of executive officer of the nautical school ship *St. Mary's*, and at once started for England to superintend the preparation of the *Pandora*, for, although she had already seen a good deal of Arctic service, Mr. Bennett intended to strengthen and refit her before allowing her to start on her new voyage. This work occupied some time; and as soon as it was completed the vessel crossed the channel to Havre, where, on "Independence Day," the fourth of July, her name was formally changed to *Jeannette*.

Meanwhile it had been decided that the expedition should attempt to reach the Pole *viâ* Behring Strait. The western route by way of Smith Sound had been tried over and over again, and the terrible reputation of the pack traversed by Commander Markham dur-

ing the English expedition of 1875–6 was by no means encouraging. The eastern route, on the other hand, had never had a trial, and even if the warm Kuro Siwo current did not, as some scientists supposed, ensure open water to the northward of Behring Strait, Wrangel Land was believed by others to be the eastern extremity of a Polar continent supposed to extend westward to Greenland. In either case the route promised well.

From Havre the *Jeannette* sailed for San Francisco under the command of De Long, who was accompanied by his wife and little child. Most of the Arctic crew were to be shipped in America, but before starting De Long was joined by Mr. Danenhower, his navigating lieutenant; John Cole, boatswain; and Alfred Sweetman, carpenter, all of whom were transferred from vessels serving at the time in European waters.

The voyage lasted nearly half a year, but at last the *Jeannette* reached San Francisco, where she was further examined and strengthened. New boilers and greatly-enlarged coal bunkers were provided, an abundant supply of instruments, stores, and provisions of every description was laid in, and seamen and officers were selected. The ship's company was of somewhat mixed nationality, for although De Long had a rooted objection to Frenchmen, Italians, and Spaniards, and owned no love for "English, Scotch, and Irish," he did not confine his selection to his own

countrymen, but rather gave the preference to Norwegians, Swedes, and Danes. The officers, however, were all Americans, and, beside those already mentioned, included Lieutenant Chipp, of whose many qualifications for the post De Long had already had practical experience; Mr. George W. Melville, engineer; Dr. James M. Ambler, surgeon; Mr. William Dunbar, ice pilot; Mr. Jerome J. Collins, meteorologist; and Mr. Ramond L. Newcomb, naturalist. Another valuable man was William Nindemann, the ice quartermaster, whose acquaintance with Arctic matters was of a most exhaustive character.

In due time the last preparations were completed, and on the eighth of July 1879 the *Jeannette* steamed out of San Francisco Bay. For a few days some of the party were as unhappy as it was in the power of sea-sickness to make them; but before the *Jeannette* reached Ounalaska, her first calling-place, their misery was a thing of the past, and they had shaken into their places as comfortably as if they had been at sea all their lives.

From Ounalaska De Long proceeded to St. Michaels, a trading station on the southern shore of Norton Sound. Here he took on board more coal, numerous furs, forty dogs, with sledges, harness, and dog food, and also two natives named Alexey and Aneguin, who shipped as dog-drivers and hunters. The embarkation of this miscellaneous assortment occupied several days, but by the twenty-first of August all was safely on

board, and the *Jeannette* departed for St. Lawrence Bay, on the western side of Behring Strait. This was a deviation from her proper course, but De Long had been requested by the navy department to look out for Nordenskiöld, of whom no news had reached America for many months.

At St. Lawrence Bay a chief, whose knowledge of English was extremely limited, gave the explorers to understand that about three months earlier a ship, apparently the *Vega*, had visited the bay, and had then gone southward along the Kamchatkan coast. This was satisfactory as far as it went, but as the last definite news of the Swedish expedition had been received from Cape Serdze Kamen, De Long decided to proceed thither.

The cape in question was reached on the twenty-ninth of August; but, in the absence of intelligible language, the most judiciously devised signs failed to elicit much information from the natives, until an old woman was found who was able to talk with Alexey. Things then went on swimmingly. Nordenskiöld, she said, had wintered in Koliutchin Bay, but his ship had left some time before the present visitors arrived. One story thus tallied with the other; but to make assurance doubly sure, De Long called at Koliutchin Bay before he turned the *Jeannette's* head northward and steered for Wrangel Land.

After sailing for a couple of days through loose ice, the solid pack was sighted, and a few hours after-

wards the *Jeannette* was steaming along its edge in search of a convenient opening. This was not easy to find, but the following morning (September 3) a lead was discovered which apparently ran indefinitely towards the north-west. The chance was too good to lose, and the ship was accordingly steered into the ice, and for a day or two continued to dodge about among the floes, sometimes making a little way, sometimes lying at anchor to await better times, and also to avoid losing sight of Herald Island, where De Long desired to winter, though he saw little chance of getting there, since the forty miles of heavy ice which lay between the ship and the island effectually prevented any approach to the latter.

The pack, so far from showing any intention of opening, closed more and more firmly around the *Jeannette*, until, by the eighth of September, she was completely frozen in. De Long still hoped to escape; but as, for the present at least, this was impossible, the rudder was unshipped, lest the hug of the ice should become too affectionate.

Four or five days after the ship was frozen in, Chipp, with Melville, Dunbar, Alexey, and a sledge drawn by eight dogs, set out to reconnoitre Herald Island. The result of their researches was not very satisfactory, for though, near the island, the ice was comparatively light and open, seven miles of heavy and practically impassable ice intervened. De Long had hoped to obtain some driftwood for fuel, but none

was seen, though, had there been plenty of it, it was questionable whether it could have been conveyed to the ship.

A few days after the return of the sledge party, a bear provided a little excitement of a profitable description. Chipp and Dunbar, having been out to examine a trap in which, hitherto, no capture had been made, came back in high spirits with the news that, not only had a bear been caught at last, but that he had inconsiderately made off with the trap. De Long and Melville seized their rifles, and the four set out on a pursuit which would probably have been fruitless, had not the trap with its chain acted as an anchor by becoming entangled in the ice, and so securing the unlucky bear. His mate would not desert him, and the two speedily fell before the rifles of the explorers, who thus obtained a good supply of food for their dogs, and a welcome addition to their own bill of fare.

The occasional pursuit of a seal or walrus, and, less frequently, of a bear, was for some time the only excitement which offered. Day after day passed; September gave place to October, and October in turn was followed by November, without any material change taking place in the condition of the ice. The surrounding pack sometimes opened a little, but the ship lay in the centre of a large floe, formed, apparently, of two ice masses firmly welded together, and she merely altered her position as the floe happened to

drift. But, though the *Jeannette* was stationary, no one on board was idle. A deck-house was constructed, the engines were cleaned and painted, many attempts were made to induce an electric light generator to work, and a variety of other preparations for winter were carried forward. Scientific observations kept several of the officers employed, and constant soundings were taken through a hole cut in the ice. From time to time various objects were brought up by the dredge, among them a beautiful piece of white coral, evidently a stranger to the locality, and probably carried thither from the sunny south by the Kuro Siwo or some other warm current. As usual on shipboard, the men were divided into watches, and to ensure their taking exercise, the "watch below" spent part of each day in hunting, though their attempts to replenish the larder were not always attended with success.

The dogs, with their various idiosyncrasies, were a constant source of interest. Some were incorrigibly lazy, and, whenever they could manage it, shirked their work, thus giving great offence to their more industrious brethren, who seldom forgot to administer condign punishment. One day a dog named Bingo, contrived to slip out of his harness and make his escape, leaving the rest of the team to do his work as well as their own. Had they been allowed to do so, they would at once have given chase; but this being prevented, they bottled up their wrath, and waited quietly for some hours. But vengeance was

merely delayed, for when the offending Bingo attempted to steal back to his quarters, they attacked him furiously, and before any one had time to rescue him, he had been bitten so severely that he died in a few minutes.

Towards the middle of November, the ice began to break up, and, under pressure from outside, the *Jeannette's* floe cracked and broke in a manner which, for some days, kept everybody in a state of excitement. Everything was brought on board, and for some time the ship seemed to be in the greatest danger, as a huge pile of crushed ice masses advanced towards her, threatening to overwhelm her. But when the catastrophe seemed imminent, the advancing ice stream suddenly stopped, and the danger passed. The next day, the whole of the ice broke away from one side of the vessel, and with three dogs asleep on it, floated off until it was about five hundred yards distant. There it stopped, and as the frost was by this time very decided, new ice formed over the opening, thus enabling the dogs to come on board again. All these dogs were wonderfully hardy: even when the cold was most severe they made no objection to sleeping on the floe, where the warmth from their bodies frequently thawed out holes an inch deep.

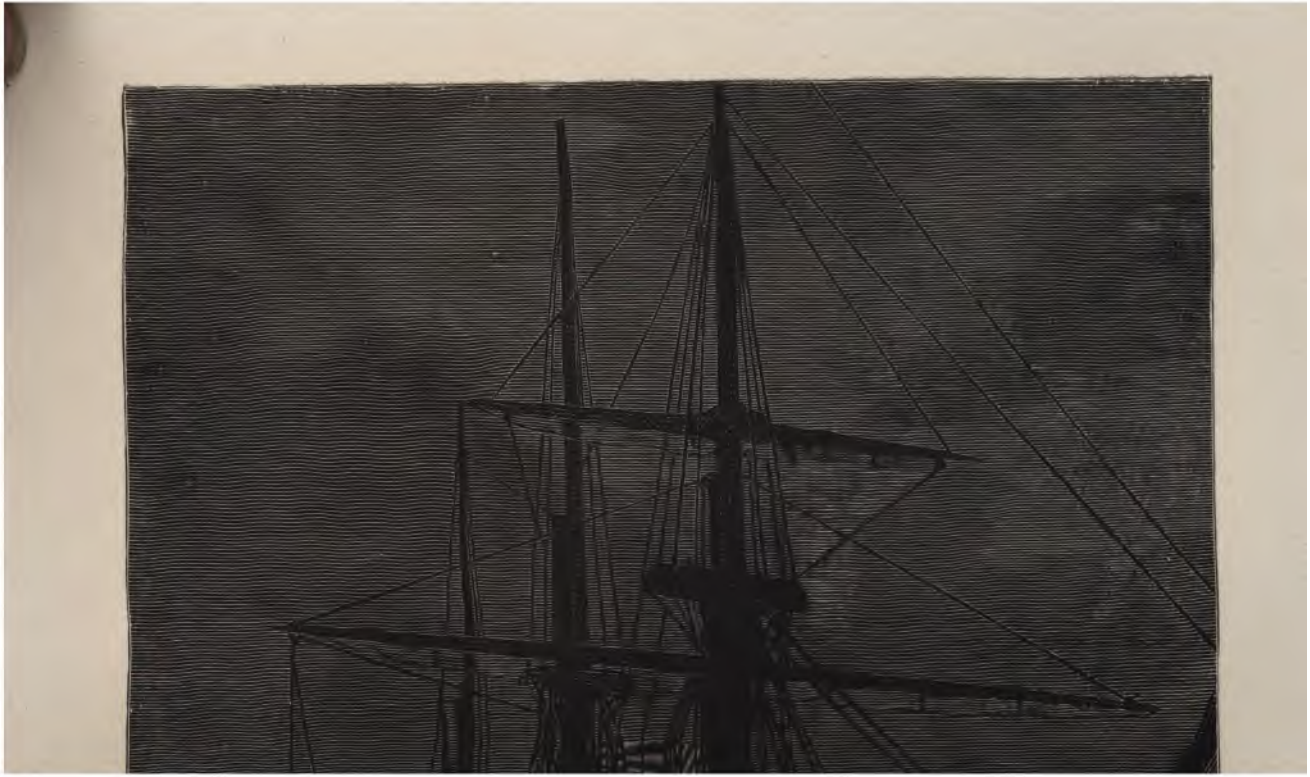
The latter half of November was a time of constant anxiety. The ice was frequently in motion, and several times violent gales almost tore the masts out of the ship. Once she freed herself from her

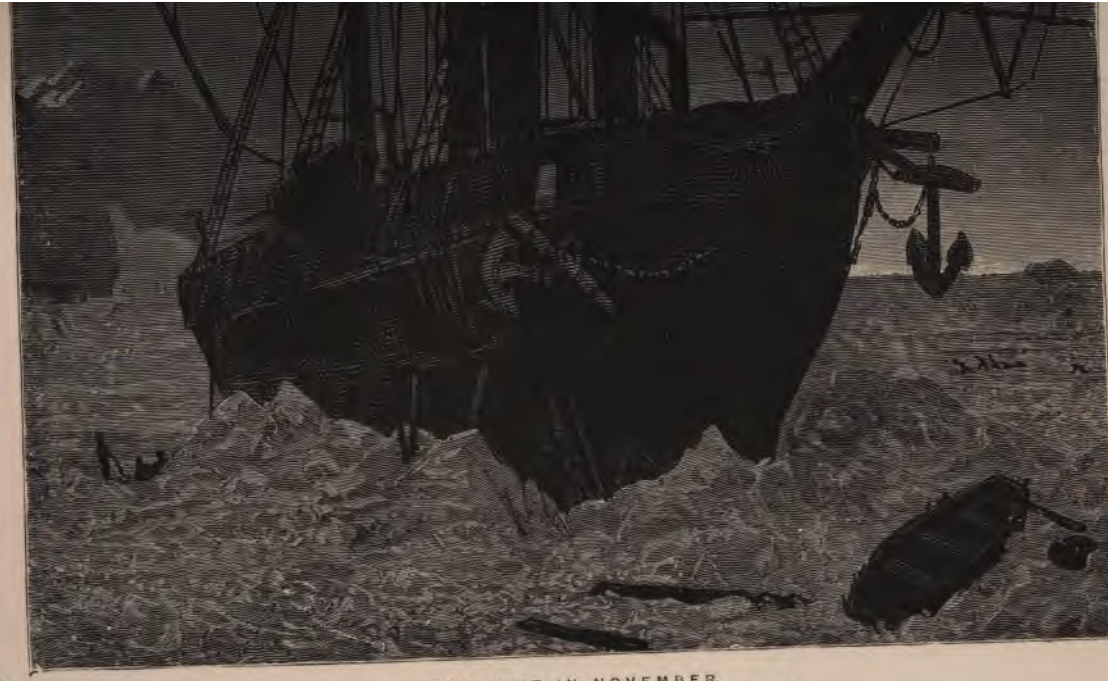
bondage, and drifted through a sort of canal into a large open pool, where she was shortly afterwards surrounded again. Then came a fearful commotion among the floes; it seemed as though two ice giants had met in deadly conflict, and the *Jeannette*, unfortunately for herself, being between them, experienced a succession of nips which threatened to cut her in two. It was a close shave, but the plucky little vessel survived the attack, and in due time the ice combatants subsided into quietness.

Very soon after the *Jeannette* was beset a serious difficulty arose with regard to the supply of drinking water. Other Arctic expeditions had obtained fresh-water ice or pure snow in sufficient quantities to supply them with this most necessary commodity; but within reasonable distance of the *Jeannette* only sea-water ice was to be found, and pure snow also was conspicuous by its absence. Sea-ice was totally unfit for use, and even snow and some ice which tasted sweet enough proved, when scientifically tested by the doctor, to contain too much salt to be used with safety. The only way out of the difficulty was to rig up a distilling apparatus; and though this required more fuel than could well be spared, De Long considered that to save coal at the expense of health would be very doubtful economy. The engineer, therefore, set to work to construct an apparatus, which, after giving some trouble, settled down to work, and discharged its duties in a very satisfactory manner.

Although the *Jeannette* had not been fortunate enough to attain a very high latitude, she was some degrees north of the Arctic Circle, and the sun, in consequence, disappeared from view about the middle of November. Daylight, however, never quite disappeared. Even on the shortest day there were several hours of light, distinctly due to the invisible sun, and frequent vivid auroras did their best to supply the deficiencies caused by his absence from the scene.

Christmas was celebrated in as festive a manner as was possible under the circumstances, though two of the officers were scarcely in a position to be very jovial. Mr. Danenhower was suffering from an inflamed eye which refused to yield to treatment, while Mr. Dunbar, having contracted a very severe cold, was altogether out of sorts.





TWILIGHT IN NOVEMBER. *Page 66.*

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## CHAPTER VI.

### IN DURANCE VILE.

THE new year opened drearily enough for poor Danenhower, whose eye became steadily worse, and, before long, compelled him to take refuge in a darkened room, where he remained for weeks, unable to endure the smallest gleam of light. But neither protection from light nor the doctor's constant care and attention produced any effect. The inflammation continued to increase; and though, as time went on, operation after operation was performed and heroically endured, the poor fellow grew worse rather than better, and it became apparent that, so long as he remained in the ice, there was no chance that a cure could be effected. Otherwise, so far as health was concerned, no one had much cause to complain: Dunbar improved slowly, though his cold had sadly pulled him down; and the only other ailment was sleeplessness, from which several of the ship's company suffered more or less.

Further trouble was at hand. Early on the morning of the nineteenth of January, De Long, who seldom

retired to bed before the small hours, heard a loud noise, but though he at once ran on deck, he could see nothing to cause alarm; everything appeared to be just as usual. A little later the wind shifted and disturbed the ice, which speedily avenged itself on the ship, whose sides were treated to a terrible squeeze; but, as the *Jeannette* had before withstood a still harder nip, De Long felt little or no uneasiness. Some hours later, however, a coal-heaver named Sharwell, while at his work, heard a sound as of running water, and a hasty examination revealed two streams of water rushing through the ship's side near the bow. This was a serious matter. The water was already three feet deep in the forehold, so the deck pumps were set to work, and Melville and his assistants devoted their energies to getting the steam pump into order, while all the men who were not too busy elsewhere removed flour and other perishable stores from dangerous proximity to the water.

Fortunately the pumps proved equal to the demand made upon them, though, until the leak could be found and stopped, it was not possible to clear the ship of water. De Long believed that her forefoot had been broken or twisted; but however this might be, the leak was a very serious one, and the sledges were packed, the boats got ready, and all preparations made for leaving the *Jeannette*, should it become necessary to do so.

While matters were in this state, everybody except poor Danenhower, who deeply felt his inability to be

useful, was working to the full extent of his strength. Day after day the monotonous sound of the pumps continued; but, though a water-tight bulkhead was built across the forepeak, and every crack and cranny was carefully stopped up with ashes and picked felt, the water still found its way into the ship, which, in consequence, became most unpleasantly damp and dirty. With so much that was disagreeable on hand, the rapid increase of daylight was a great relief; and when, on the twenty-sixth of January, the sun burst forth in all his splendour, everybody turned out to give him an appropriate greeting. During the seventy-two days of his absence the *Jeannette* had not, apparently, materially altered her position, for the northern coast of Wrangel Land, which had last been seen on the fourteenth of November, was still plainly visible on the south.

As no bears had been seen during the winter, it was a pleasant surprise when, on the first of February, Chipp succeeded in shooting one which imprudently ventured within range. He was rather a small specimen of his race, weighing only about four hundred pounds; but, though not in first-rate condition, he was speedily cut up into convenient joints, and suspended in the rigging. Shortly afterwards one of his brethren, while prowling in the neighbourhood, was attracted by the odour, and approaching the ship attempted to ascend the gang-plank. His approach was observed, and Dunbar, standing on the deck, greeted the visitor

with a bullet, which caused him to beat a hasty retreat. The dogs at once followed, and Bruin, annoyed by their attentions, sat down to drive them off—an error of judgment which cost him his life, for Dunbar quickly came up, and with another shot ended his career. This was a much larger animal than the other, being about eight feet in length and scaling nine hundred pounds.

While so much work was on hand there was little time or opportunity for taking observations, and the daily drift of the ship remained for some time unrecorded. She still continued to move with the ice, and on the twentieth of February Wrangel Land, which for so long had been visible on the southern horizon, had entirely disappeared from view. This was so far satisfactory, as it proved that the explorers were being carried somewhere—probably in the direction in which they wished to go; but it was a purposeless drift, for they were wholly at the mercy of the merciless ice, which varied its course so frequently that in one week the *Jeannette* was carried first east, then west, then north, and finally south-west. But even so, the matter was not hopeless, for occasionally fragments of wood, etc., which must have come from Siberia, were found on the floes, thus proving that, in spite of the vagaries of the drift, its general direction was northward.

Notwithstanding the return of the sun, intense cold continued. A temperature of $-45°$ Fahr. was

not unfrequently registered, but De Long doubted the reliability of his mercurial thermometers, which continued to record temperatures of from $-40°$ to $-50°$, although $-39°$ is the point at which mercury is supposed to freeze. But neither cold nor hard work could damp the spirits of the crew, and when at liberty the men constantly went off on long tramps over the ice to look for open water, or, if luck would have it so, to obtain a bear or two, a few seals, or a walrus, to replenish their own or the dogs' larder. The latter, poor fellows, had been, perhaps, the chief sufferers from the disturbance caused by the leak. It was necessary to economize fuel, and for some days their food was served out to them in hard frozen lumps, uneatable to any whose teeth were at all imperfect. For a time they submitted quietly, but then, recognizing a friend in De Long, and knowing, perhaps, that he had power to right their wrongs, they came round him and told him, in language which no dog-lover could fail to understand, that they had a grievance. The canine petition was not made in vain, for De Long, who had a soft place in his heart for "both man and bird and beast," investigated the matter, and arranged that in future the dogs' meat should be properly steamed and softened.

Month after month passed, and still the leak remained undiscovered, and the steam pumps were almost constantly employed. The amount of fuel consumed in this way became a most serious item,

and at length it occurred to De Long that a windmill pump might be constructed. He suggested the idea to Melville, who at once expressed his willingness to take the work in hand, and his confidence that he could make a good job of it. He did not over-estimate his powers. Having fully considered the matter he set his men to work, and in due time the windmill was energetically revolving on deck and pumping up water in a most satisfactory manner. Hand pumps might, of course, have been employed; but the continuous use of them would have undermined the strength of the men, and though De Long continued to hope for the best, he could not shut his eyes to the possibility that it might become necessary to desert the ship. If this should happen, the men would, he knew, need all their strength, if they were to reach land in safety.

Early in May the sun discontinued the practice of setting nightly, and as the incessant glare of light on the snow was very trying to the eyes, one or two slight cases of snow-blindness occurred. Curiously enough the first victim was Dunbar, who had probably a larger Arctic experience than any man on board, as a good part of his life had been spent in the Behring Strait whale-fishery; but victory is not always to the strong. His case served as a timely warning to others, and the use of goggles out of doors was enforced by a general order. Danenhower by this time had improved slightly, and with eyes care-

fully shielded from the light, was able to be in the cabin, and on fine and comparatively warm days to go on deck, keeping, of course, under the shadow of the awning. This answered very well for a while, but he soon became too venturesome, endeavoured to use his eyes, and finally allowed the bright sunshine to tempt him beyond the friendly shadow, crowning his imprudences by neglecting to change his foot-gear. The result was not encouraging, for he was obliged to retire again into private life, and avoid all light for a season.

About this time bears made their appearance so frequently that their advent caused less excitement than had formerly been the case, but an opportunity of shooting one was never allowed to slip. The creatures were wonderfully tenacious of life, and many which were severely and even mortally wounded outstripped both men and dogs, and effected their escape—a waste of life which, quite apart from the loss of the meat, always grieved De Long.

June opened with a certain amount of encouragement. Not only had summer—or that which in the Arctic Regions passes as such—arrived, but during the previous month the drift, though not very rapid, was all in the right direction, and the *Jeannette* was somewhere about eighty miles nearer to the Pole than she was on the first of May. Certainly

> "The ice was here, the ice was there,
> The ice was all around,"

and not a lane or pool of open water was to be seen; but with summer weather the pack might break up at any time, and then—hey for the Pole! But day after day passed, and the long-desired liberation seemed as distant as ever. Hope was deferred with a vengeance, and then instead of encouragement came disappointment, for the drifting ice changed its direction, and slowly but steadily carried the ship southwards. This southerly drift continued during the whole of June, with the unpleasant result that at the end of the month the *Jeannette* was farther south than she had been at the end of May.

To add to De Long's anxieties, one of the coal-heavers, named Nelse Iversen, began to show symptoms of insanity. For some days during the early part of June he was very despondent, insisting that a mutiny was on foot, and that he was being watched. A more awkward form of illness could hardly have occurred; but fortunately the attack was only temporary, and after a time the poor fellow began to mend.

Owing to the necessity of economizing the coal, no unnecessary use of fuel could be allowed, and on the seventh of June fires were abolished for the summer. The sun, of course, was gaining power; but still the temperature of the air remained very low—though, when compared with $-45°$, $+19°$ may well have seemed balmy and summer-like. It was, in fact, almost too warm for the dogs; and when the mercury

reached 32° they hung out their tongues and lay about in shady corners.

Though the position of the leak was still undiscovered, from some cause, equally unknown, the amount of water which made its way into the ship gradually decreased until, early in July, it became practically *nil.* This may have been due to some extent to the hardening of the stuffing with which Nindemann and Sweetman had liberally calked every inlet, and also to the fact that the melting of the surface ice had allowed the ship to rise. But whatever the cause might be, the result was a great relief to all concerned.

Ever since the distilling apparatus had been set to work pure ice and snow had been sought in vain. The quest seemed hopeless; but the doctor, being of a persevering disposition, patiently continued his researches, and as the ice began to melt he found that it lost its saltness, and became fit to be converted into drinking water. As this would save coal, as well as much time and trouble, the discovery was hailed with joy, and all hands set to work to collect suitable ice wherewith to fill the tank. Over this work the doctor maintained the strictest supervision, and tested every barrelful before allowing it to pass muster.

The dogs, very properly, were pressed into the service to draw the ice-laden sledges to the ship; but three of them, known as the "hoodlums," had a rooted objection to work of any description, and

unless captured by guile were usually conspicuously absent when there was any hauling to be done. They objected equally to seeing any other dogs work, regarding them, apparently, as "blacklegs," who needed a great deal of licking into shape, which kindly office they were quite willing to perform. All the dogs, indeed, seemed to delight in a good rousing fight; and but for their thick coats, which served as most effectual defensive armour, few of them would ever have possessed a whole skin. Three or four of them would form an alliance offensive, defensive, and friendly, eating, sleeping, and fighting together, unless one of the gang should chance to give offence to his comrades, when, having been duly punished, he was, for the time being, drummed out of the fraternity, and forced to betake himself to the floe, whence he dared not come back until he received permission to do so. The return of a sledge team was usually the signal for a fight which often called for human intervention, but the removal of the harness restored peace, and the returning dogs were allowed to proceed undisturbed to their quarters. If a single dog was absent for a time, as soon as he was seen approaching the ship the whole canine population turned out to attack him; but each clique had its own special location, and if by speed or cunning he contrived to reach his usual haunt, all hostilities were suspended, and the errant bow-wow was received back into fellowship.

In spite of their frequent rough-and-tumble fights, the dogs were capable of the strongest affection for each other; and one of them named Snuffy, who was slowly dying from the effects of a bite received in a fight at St. Michaels, was most lovingly tended by his chum Jack. This dog showed real unselfishness when his friend was concerned. He watched over Snuffy, looked after his interests, took charge of his bones, fought for him and protected him, though the other dogs also seemed to recognize the invalid's claim to consideration, and allowed many little liberties to pass unchallenged.

Day after day slipped uneventfully away, and summer was rapidly passing, but, though at a little distance from the ship the ice cracked and open pools and lanes of water were seen, the *Jeannette* seemed to be condemned to perpetual imprisonment. It was heart-breaking work, for with each succeeding day hope sank lower, and another dreary winter loomed so much nearer. More than a year had passed since the ship left San Francisco—it was nearly a year since she entered the ice; and in that time what had she accomplished? Nothing; and her commander's heart grew sick with disappointment and hope deferred.

Sometimes De Long took the dingey and amused himself with a solitary pull on one of the neighbouring water-lanes. As a rule he met with no special adventure; but one day, which chanced to be his

birthday, turning suddenly round, he saw not a hundred feet away a bear, who, to judge from his astonished countenance, was evidently wondering what on earth the man was doing. The surprise was mutual, but while De Long was considering his next move, Bruin recovered from his astonishment, and began solemnly to approach. To shout for help was no doubt ignominious, but it was, on the whole, the best course which suggested itself, and De Long hailed the ship at the top of his voice, to the renewed surprise of the bear, who stopped and looked at the shouter, as much as to say, "What do you mean?" Another shout attracted attention on board, and as men and dogs rushed towards the boat, Bruin, considering discretion the better part of valour, turned tail and fled, leaving De Long master of the situation.

## CHAPTER VII.

### THE SECOND WINTER.

EARLY in September sharp frosts set in and new ice formed rapidly. De Long and his companions tried to be hopeful, and talked about an Indian summer, which might yet enable them to do something before winter finally came upon them; but day succeeded day and week followed week without any improvement having taken place. The ship remained as firmly gripped as ever, while the leak increased to such an extent that it became necessary to start the windmill pump; and about the same time, as the supply of pure ice was used up, the distilling apparatus had to be set to work again. It was hard luck, for only fifty-three tons of coal remained, and at the end of the winter very little would be left for steaming purposes, should the unlucky *Jeannette* ever again be in a position to use her engines. Practically all hope of reaching the Pole was now at an end, and the explorers could not altogether drive care away and banish gloomy forebodings. It was, however, still possible that, with the coming year,

the *Jeannette* might escape from her icy bondage; but on the other hand, so far as could be seen, there was no reason why she should not drift indefinitely with the pack.

Meantime the first thing to be done was to prepare for the coming winter. Accordingly the carpenter went to work on an improved deck-house, and sundry expedients were adopted by which it was hoped that a maximum of warmth and comfort might be attained with a minimum expenditure of fuel.

In the course of the month several rather exciting bear hunts made a pleasing break in the monotony of life, and renewed the rapidly diminishing stock of fresh meat. On one of these occasions the "hoodlum gang" showed to great advantage, and proved that, though they had souls above such menial work as hauling sledges, they were quite willing to join in the excitement of the chase. Expecting well-deserved chastisement for an assault which they had committed on an unoffending dog, they had one morning seen fit to retire to a safe distance from the ship, when, from their retreat, they caught sight of a bear quietly trotting along at a little distance. Off went the "hoodlums" in hot pursuit, followed by Dunbar, four or five other men, and a large assortment of dogs. Bruin naturally took flight, but the active "hoodlums" overtook him, and wheeled round him in such a manner that, while he was making dashes first at one

and then at another, the other dogs caught them up, and held the bear at bay until a couple of well-aimed bullets from Dunbar's rifle stretched him lifeless on the snow. He was a magnificent fellow, fat as butter, and with a thick coat of yellowish-white fur in first-rate condition. The "hoodlums," true to their traditions, declined to take any further part in the proceedings, and enforced their refusal to help in dragging the bear home by carefully avoiding being caught.

The general health of the crew still continued very satisfactory; and when, at the beginning of November, everybody was overhauled by the doctor, the only invalids were Danenhower and a man named Kaack, who, in crossing the berth-deck some weeks before, had fallen and broken his elbow-joint. It was a nasty injury, and might reasonably have been expected to cause a good deal of trouble, but, thanks to the skill of the doctor and the good constitution of the patient, a rapid cure was effected, and on the last day of September Kaack had so far recovered as to be able to go off the sick list. But his unlucky star was in the ascendant, for less than a week later he again stumbled, and falling on the injured elbow, fractured it a second time.

In due time the shortest day arrived, but was remarkable for nothing more agreeable than the lamented death of Hard-working Jack, one of the best dogs. A post-mortem examination revealed that

he had unadvisedly consumed two pieces of sharp tin, some cloth, a rope's end, and several particularly hard bones. The assortment was too much for his digestive powers, and hence his untimely end. He was not the first dog who had succumbed to a too-omnivorous appetite, and, unfortunately, it usually happened that the victims were among the most valuable of the team.

Christmas, of course, was duly honoured, and everybody did his best to amuse and cheer his comrades. The men got up a variety minstrel entertainment, to which the officers were invited; the cook contrived to turn out some very creditable mince-pies, and though the orthodox roast beef and turkey were unavoidably absent, their place was filled by roast seal, which, with apple jelly, proved a very fair substitute. Altogether fun and jollity became the order of the day, and the success of the minstrels induced the men to get up another and more ambitious performance for New Year's Eve. At the close of the entertainment all hands joined in singing the "Star-spangled Banner," and an hour or two later the new year was ushered in with the striking of eight bells as a dirge for the year that was gone, followed by three cheers for the *Jeannette*, and then eight bells more as a welcome to the new-born year. What would it bring forth?—success or failure?

Though the relative positions of the ship and the ice did not vary, the whole mass still continued to

drift more or less vaguely. During the summer the course of the floe which imprisoned the luckless *Jeannette* had been most erratic, but in the winter it settled down to a steady drift. On the first of February the ship had reached the improved position of 74° 39′ north latitude; and when, five days later, the sun returned, he shone on hopeful men, though, according to the doctor, they all looked rather white and careworn. Everybody, however, was still in good health; even Danenhower was better, and could sometimes venture to go out.

During the winter the bears again absented themselves, but the return of the sun was the signal for their reappearance. One day a big she-bear incautiously showed herself, and off went the dogs to the attack, closely followed by Nindemann and Wilson, each armed with a rifle. The dogs soon surrounded their quarry, dancing about her and annoying her to such an extent that, though they effectually hindered her flight, several of them received a very severe mauling, the result of venturing too near her claws. While the fight was in progress the men ran up, and with a couple of shots finished the bear; but being at close quarters, one of the bullets passed clean through her and struck a fine dog, killing him almost immediately. One dog killed and seven others severely wounded was a heavy list of casualties for a single bear-hunt. Certainly the bear which caused them paid the penalty with her life, but on another occasion

when a valuable dog was lost even this consolation was not forthcoming.

About the middle of April two of the "hoodlums," Prince and Wolf—the third was in hospital, suffering from the effects of a mauling received from the last bear—went off hunting on their own account. They had not long started when the Chinese cook and steward caught sight of them, and, with another dog, at once followed in their wake. Several hours passed, and neither Chinamen nor dogs reappeared; but about 7.30 p.m., the steward came back and told a somewhat complicated tale, in which the doings of a bear and the human and canine hunters were considerably mixed up. Eventually he had come home alone, with the view, as he pointed out, of serving the officers' supper, while the dogs and the cook continued their chase. It was not easy to disentangle the story, but the cook's absence was undeniable. De Long naturally felt somewhat anxious, but as a sharp wind had already covered up all tracks with snow, search was useless. Masterly inactivity was the only course possible; but it was a considerable relief to the lieutenant when, about midnight, the Chinaman returned, accompanied by one dog. The others, when he last saw them, were still pursuing the bear, and he could not induce them to return.

The next day three men and three dogs went in search of the truants, but though they found tracks, neither bear nor dogs were to be seen, and nearly a

week passed before any information was obtained. Then, one evening, Prince returned alone, terribly thin and exhausted. As he was unable to relate his adventures, the fate of his friend remained unknown; but his masters surmised that Wolf had been mortally hurt by the bear, and that Prince had remained with his friend until death overtook him, and had then returned to the ship.

Unfortunately for himself, as well as for the commissariat, about the time that the bears began to wake from their winter sleep Alexey fell ill. He had a foolish habit of lacing his moccasins as tight as possible, and the cold and the pressure combined produced a large ulcer on his leg which quite unfitted him for work and proved very difficult to cure.

During April the ice began to open anywhere and everywhere except in the immediate neighbourhood of the *Jeannette*. But though it would not release her, it carried her steadily northward, and De Long's hopes rose as each observation gave a higher latitude. It really did look as if, after all the disappointment, something might be accomplished, when on the twenty-fifth of April the ship was found to have reached 76° 19′ north latitude.

## CHAPTER VIII.

### GOOD-BYE TO THE "JEANNETTE."

UP to the middle of May 1881 the *Jeannette's* long drift of more than twenty months had been almost barren of results. She had, indeed, exploded the theory that Wrangel Land was a continental tract, but this at best was a negative and unsatisfactory discovery. Since that desolate island was last sighted not a vestige of land had been seen, and the explorers were almost ready to believe that the whole world was made up of ice and snow, when, on the evening of the sixteenth of May 1881, the welcome shout of "Land!" rang through the ship. Mr. Dunbar had, according to custom, ascended to the masthead to look about him, hoping against hope to find open water close at hand. No! the ice still lay as firm as though it never could or would break up; but yet this time he had not drawn the usual blank, for there, away to the westward, lay —land!

At once all was excitement. At last something had been done. Hurrah! the expedition had dis-

covered something—had added a little to the world's knowledge. "Thank God!" said De Long.

Every one was eager to visit the newly-found island, but the distance and the difficulty of transit were alike too great to tackle just then, and the explorers were fain to content themselves, for the time being, with a distant view of their discovery, which, in compliment to the ship, was named Jeannette Island. Unfortunately the ice continued unpropitious to the proposed landing: it would neither clear out of the way nor drift the *Jeannette* towards her namesake, but carried her persistently northwestwards. This was disappointing at first; but when, on the twenty-fourth of May, another island was sighted, the ship's company concluded that they had, after all, no reason to grumble.

Simultaneously with the discovery of the second island, which De Long named Henrietta Island, the ice in the neighbourhood of the ship began to open. Around the islands and the vessel itself it remained as close and firm as ever, so the sight of the intermediate water-lanes and pools was rather tantalizing. Certainly they could be utilized for boating; and hunting parties promptly set out, though the boats had to be dragged or carried to the water, an operation which sent a coal-heaver named Lauterbach into hospital with a badly strained back. Chipp also was obliged to be placed on the sick list, having completely broken down from long-continued overwork.

He had been ailing for some time, but refused to admit that he was unwell, until at last he collapsed, and had, most unwillingly, to go to bed and allow himself to be doctored.

In the course of a week the *Jeannette* had drifted so far towards Henrietta Island that De Long considered that a sledge party might, without undue risk, be sent to take possession. Now arose the question, Who should go? The disablement of Chipp and Danenhower prevented not only themselves but De Long from leaving the ship; the doctor could not desert his patients, and the command of the sledge party fell to the lot of Melville. Preparations were soon completed, and on the last day of May the engineer, accompanied by Dunbar and four men, with fifteen dogs to drag their sledge, set out in high spirits. The dogs seemed less enthusiastic, and at the first sign of open water several of them broke loose and went home, but were not graciously received by De Long, who forced them to return to their duty, and the advance then steadily continued.

The day after the departure of the sledge-party a new trouble appeared on board in the form of an outbreak of lead-poisoning. The chief sufferers were Tong Sing the Chinese steward and Mr. Newcomb, but four others, including the unlucky Chipp, were more or less affected. What could be the cause? The distilling apparatus was first suspected, as its joints were made water-tight with red lead; but this was

unavoidable. Sundry cooking utensils patched with solder were dismissed from service. Finally it was discovered that the mischief was due to the tinned tomatoes. These at first had been issued four times weekly, but of late they had appeared daily on the table; hence, no doubt, the evil result on those of susceptible constitution, since the doctor's analysis revealed the presence of a considerable quantity of lead in the juice. The offending vegetable was not altogether banished, for as no harm had ensued when it was only eaten four times weekly, De Long ordered that in future the original allowance should be resumed. This, apparently, met the case, for the invalids soon began to mend, the steward, who was originally one of the chief sufferers, being among the first to recover. While he was off duty his compatriot the cook not only got through all the duties performed usually by the two, but cooked for the invalids generally, waited on Chipp, and filled up the balance of his time by nursing Tong Sing.

Early on the morning of the fifth of June the man on watch informed De Long that the sledge party was in sight. The colours were hoisted, and everybody turned out on the ice; but while the men were endeavouring to fire a salute from the whale-gun, which was out of order, De Long returned on board. A minute or two later a gun went off. De Long was not sure whether it was the whale-gun or a salute from the returning explorers, and was running up to

the bridge to make sure, when, as he passed the windmill, round came the whirling sails and sent him flying with a badly cut head. This necessitated an application to the doctor, who stitched up the wound; and when this was done De Long, though feeling stunned and dazed, was able to go on deck again. A couple of hours later the explorers were on board, all well except Mr. Dunbar, who was suffering from snow blindness in such a severe form that for some days he had been entirely helpless.

The ice crossed by the explorers on the outward journey was terribly rough and broken. When the men were not cutting a road through the hummocks, they were generally ferrying sledge, dogs, and stores in the boat across some lead of open water; and when neither of these occupations engaged their attention, they took a spell of hauling, to assist the dogs. As they approached the island the travelling became still worse. The pack had broken up, and the floes were all more or less in motion. So, leaving the boat and stores behind, Melville and his companions dragged with them the unwilling dogs, and made their way as best they could across the seething mass to the shore. Here they found little to reward their bravery. On the eastern side a few glaciers were seen, but the greater part of the surface consisted of desolate snow-capped rock masses, enlivened here and there by a patch of grass or moss.

The return journey was accomplished just in time,

for the day after the party reached the ship the surrounding pack began to break up. For a time the floe which had so long imprisoned the *Jeannette* withstood the pressure, but at last it could hold out no longer, and opening up allowed the vessel to drop once more into her native element. Hardly was she in the water when the leak ceased. This, though strange, was most satisfactory, since, if the ship could but get free, there would be no further need for pumping, and she might be able to make her way—somewhere.

For about twenty-four hours the *Jeannette* lay quietly in a pool of open water, but on the afternoon of the twelfth of June the ice bore down upon her with irresistible force, causing her timbers to crack and the ceiling of the lower deck to open its seams. It was evident that the ship was in the greatest danger, and in view of probable disaster the starboard boats were lowered and hauled off to a place of safety on the solid floe. Hardly was this accomplished when the nip increased to a fearful extent, and while the after-part of the ship was held perfectly motionless, at the bows the ice was exercising an upward pressure. No ship built by mortal hands could withstand the strain, and Melville, who was in the engine-room, watched the hapless *Jeannette* begin to break abaft the boilers, while at the same time a stream of water rushed through her starboard side.

Then the nip eased off, and hope revived, though

the work of removing dogs, sledges, and pemmican to a safe place was still actively carried forward. But the relief was only temporary, and very soon the relentless ice closed on its helpless prey, crushing her sides together till the very deck bent under the pressure. Things looked black indeed; it was obvious that there was no time to lose; and as soon as the sick were in safety on the floe, all hands busied themselves in carrying out provisions, clothing, and bedding, as well as the ship's books and papers, and a variety of useful stores.

The end was at hand; closer and closer came the ice, and, as beams and planks splintered and gave way, torrents of water rushed into the doomed ship. Meanwhile, as long as it was possible to work on board the men toiled on, fetching out stores—their very lives, as they well knew, depended on their exertions; and it was not until the water had reached the spar deck that they relinquished their efforts, and betaking themselves to the floe took stock of their goods. Meanwhile the *Jeannette* sank lower and lower, and by four o'clock in the morning she had totally disappeared, leaving her crew houseless and homeless on the ice.

A few days were spent in packing and preparing for the march. Of the miscellaneous collection of goods which had been saved, only the most useful could be taken, on account of the necessity of keeping down as far as possible the weight of the sledge loads,

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and many things were unavoidably abandoned. Boats, of course, were indispensable; and with two cutters, a whale-boat, and the sledges laden with tents, sixty days' provisions, cooking apparatus, etc., it was found that both men and dogs would have to go over the same ground several times. It was impossible to advance everything at once, and knowing this, the men went cheerily to work, though it would have been difficult to find a worse time for travelling, for the snow was soft and the sledges sank into it instead of gliding over it. In order to avoid this trouble as far as possible, De Long arranged to travel at night, when the rays of the sun were less powerful than during the day, and the breakfast hour was accordingly changed to 7 p.m.

The difficulties of the journey soon began. If the condition of the snow was bad, that of the ice was worse: it was almost everywhere so rough that to haul the heavy sledges over it required the utmost exertions both of men and dogs. The pack, too, was in a very disturbed state; not only were pools and lanes of open water liberally distributed along the route, but wide cracks opened in the most casual manner almost under the men's feet. Not unfrequently, where one sledge found apparently solid ice the next was stopped by a water-lane. This inconsiderate conduct on the part of the ice taxed the strength and ingenuity of the travellers to the utmost. Not unfrequently they pressed the ice itself

into their service, and finding a small floe, embarked themselves and their property on it, and made shift to shove it across the obstructing water. At other times several blocks rammed together served, for the nonce, as a bridge. Work of this sort was as hard on the sledges as on their owners, and they frequently avenged themselves by doubling up their runners or otherwise striking work. With so many difficulties progress was very slow, and though the party only halted for about an hour at midnight, when they dined, a couple of miles or so was as much as they could accomplish in a whole night.

So much exertion was far from being good for the sick, who still occupied most of the doctor's time and attention. Chipp continued very weak; it was about as much as he could do to walk from one halting-place to the next, and on one occasion at least he had very unwillingly to become a passenger on a dog-sledge. Danenhower's eyes were in what had now become their normal condition; one was altogether disabled, and though he was anxious to do all he could, he was unfit for any regular duty. In addition to these two, Tong Sing, Alexey, and one or two others were still suffering more or less from the effects of lead-poisoning.

The rest of the party divided the work among them. De Long loaded sledges and looked after things in general; Dunbar, by virtue of his ice experience, went ahead to select the route; Melville acted as commander-in-chief of the hauling depart-

ment; and Ericksen and Leach, two of the men, took charge of the dog-sledges in particular. Everybody else did whatever was required of him at the moment; and between hauling boats and sledges, making roads and bridges, propelling ice-rafts, and the manifold occupations not included under these heads, every man who was in condition to work found his hands very fully occupied.

During the first week out, one day was so thoroughly wet and wretched that even the dogs would not face the weather, and instead of starting as usual about 8 p.m., the party had to remain in most uncomfortably wet tents until after midnight. It was a case of choosing the lesser of two evils, for the discomfort of staying in the tents was less only than the discomfort of advancing. The rain ceased at last, and the sledges got under way, but the weather continued dull and cheerless, and fog succeeded the rain.

Owing partly to the weather and partly to manifold and more pressing duties, several days passed before De Long obtained any satisfactory observations. At midnight of Saturday the twenty-fifth of June, however, all was propitious, and De Long set to work with his sextant. The result was astonishing. For a whole week the party had been steadily, if slowly, travelling southward, and yet, if his figures were correct, they were at the end of that time twenty-eight miles farther north than when the *Jeannette* sank. It seemed incredible, and he went

over his calculations again and again, but only to find that they were perfectly correct. Then he took another observation, but the result was much the same; and he was forced to the conclusion that the ice was drifting northward faster than, with all their endeavours, they could advance to the southward. This was very discouraging, but it occurred to De Long that a change of course from south to south-west would help to overcome the difficulty. The alteration was accordingly made; but, for fear of dis-heartening the men, and especially the invalids, De Long kept his own counsel, and told only Melville and the doctor of his disagreeable discovery.

Progress was still most disappointingly slow. Sometimes a bit of hard ice allowed the travellers to advance rapidly, but this was quite the exception. The rule was rough ice intersected by water-lanes, which, oftener than not, opened casually in front of one or more of the sledges. This inconsiderate behaviour of the ice caused a great deal of delay, and at last, in the hope of mending matters a little, the doctor, Newcomb, and Lee were appointed road and bridge makers to the expedition.

The alteration of the course so far fulfilled its object that the northward drift, supposing that it still continued, was outweighed by the southward advance. This, though slow, was steady, and every observation which was obtained showed that the retreating explorers were a little nearer than before to the coast of Siberia.

## CHAPTER IX.

### THROUGH MUCH TRIBULATION.

ON the eleventh of July De Long and Dunbar noticed a distant bank of cloud such as was seldom or never to be seen above ice. Had they at last nearly reached the open water? Hopefully they climbed a neighbouring hummock, and from its summit the telescope distinctly showed distant land and water. What land could it be? They knew not, but anyway there it was, and they rejoiced accordingly.

Up to this time, since leaving the ship, no game of any kind had been obtained. Sundry birds and one bear had been seen, but the latter had no desire to be converted into stew, and made off before Mr. Dunbar, who interviewed him at rather close quarters, could obtain a rifle. Perpetual pemmican was becoming monotonous; and when, one afternoon, Collins secured a seal, there was general rejoicing. The stew that night was something to be remembered; and when, on the following day, another seal was shot, the travellers began to feel they were living in clover. Then Collins managed to get a bullet into a walrus, and

though the monster at once dived, he soon came up again and received several more shots, which abruptly ended his career. Even then he would have been lost, had not Dunbar with prompt ingenuity cut a hole in his flipper, through which he rove the doctor's belt. The expedient answered beautifully, and the huge carcass was hauled safely to the camp. That night men and dogs feasted royally, though a comparison of seal and walrus resulted in a verdict for the former.

Several days of intensely hard work on almost impracticable ice brought the explorers within a mile or two of the island which had been seen a few days before. Here their difficulties increased, for the pack was in constant motion, and dogs and sledges had to be advanced over loose blocks of shifting, heaving ice, at one minute jammed close together, at another separated by lanes of water which opened promiscuously in quite unexpected places. Finally, after a desperate race with the shifting floes, the whole party with all their belongings contrived to reach a large floe which a strong current was rapidly driving towards the south-west point of the island. It was touch and go. If their ice-raft drifted into one particular place all would be well; if it did not— But the question was needless, for after a few minutes of breathless anxiety the men found themselves rapidly approaching the desired haven.

No sooner was the floe stationary than the work of landing sledges, boats, and dogs was begun; but hard

as the men worked, before their task was finished the floe was once more in motion, and drifted off, carrying with it De Long, Melville, two other men, and six dogs. Once among the outer swirl of ice, they would have found it difficult, if not impossible, to make their way back; but almost before any one had time to become seriously alarmed, the floe passed close to a stranded berg, on to which men and dogs leaped, and so rejoined their companions.

There was now time to think of other matters, and the explorers lost no time in scrambling across the ice-foot. As soon as they were fairly ashore the "star-spangled banner" was hoisted, and with all hands standing around their national flag, De Long formally took possession of the island on behalf of the republic, and named it Bennett Island in honour of the patron of the expedition.

A few days ashore were acceptable to all. The time was spent in exploring the coast, bird-shooting on the cliffs, and collecting specimens of various kinds. Some bear tracks were seen, but the bears themselves, unfortunately, were not to be found; in fact, with the exception of the birds, no game of any kind was seen. This was the more to be regretted since the dogs' food was running short; and on this account, before leaving the island, De Long reluctantly ordered that ten of them should be shot. It seemed cruel, but to have taken them farther would have added to the risks incurred by the whole party, and that De Long dared not do.

The ice had now so far removed from the island that the boats could be used, and alternate hauling and boating became the order of the day. The latter mode of travelling seemed to be objectionable to the dogs, and in the course of a few days eight of them ran off and were seen no more, though it was hoped that they made their way back to the island, where they would have a chance of finding food.

Boating was terribly cold work, but it was less laborious than hauling, and also more expeditious, and such good progress was made that in a few days the New Siberian Islands came into view. This was most satisfactory, and it was proportionately disappointing that, soon after the land was sighted, the pack closed up in such a manner that boating and sledging were equally impossible. For nine days the travellers remained in enforced inactivity on an ice-floe, their only consolation being a supper or two of hot seal-meat—a welcome change from the perpetual pemmican. Then the pack opened, and, though the boats were in constant danger of being crushed, they managed to reach one of the islands; and on the following day, after some little difficulty in finding a landing-place, the camp was pitched on a mossy plain a little way from the beach. Not the least delighted of the party was the dog Snoozer, the only survivor of the team, all the others having by this time, in one way or another, come to grief.

The next morning every one was astir betimes,

but soon after starting the boats got into shoal water. Finally Chipp's boat, the smaller and slower of the two cutters, parted company from the others; but, thanks to a favourable wind, after clearing the shallows, a capital run was made, and as evening drew on the whale-boat and the first cutter were hauled on to a convenient floe. Still nothing could be seen of the second cutter, and when before morning a stiff gale arose, considerable anxiety was felt. A black flag was hoisted to give the missing men a clue to the whereabouts of their comrades; but the gale and the ice between them forbade any advance, and De Long's party waited with what patience they could summon until the second afternoon, when the lost boat hove in sight.

During the halt a quantity of loose ice had drifted round the camp-floe, and before the boats could be launched this had to be crossed. It was terribly heavy work, and owing to the insecurity of the ice more than one of the party received a thorough ducking. Even when the boats were once more fairly in the water there were fresh troubles to be encountered, for though an island lay temptingly ahead, to reach it more shoals had to be negotiated. But at last the boats grated on the beach, and before long a roaring fire was doing its best to raise the drooping spirits of the men.

In the morning a return of the gale kept everybody near the camp, but towards afternoon the wind

and snow ceased, and most of the party wandered off in search of game. Neither fur nor feather was to be seen, but a good many discoveries were made, the most interesting being several groups of huts. These were all deserted and more or less dilapidated; but at any rate they showed that human beings had at some time inhabited the spot, and had doubtless been successful in hunting, for sundry deer-horns were found, as well as a wooden spoon and fork and other relics. Some fossil ivory, too, was lying about.

To make a lengthened stay was out of the question; so, after a few hours' sleep, the travellers proceeded on their way. That night they again camped on the island, and next day it was left astern as the boats ran westward before a stiff breeze, which sent a good deal of water on board. With the thermometer standing at 24°, boating, in clothing almost always more or less wet, was wretched work; but the men were wonderfully well and cheerful, and three or four days' sailing, with nightly camps on some convenient floe, brought the boats to Semenooski Island. The sportsmen were immediately landed, and before they had been long ashore not only secured a fine deer but saw numerous ptarmigan. This was luck indeed, and on the strength of it De Long decided to camp for a couple of days, in order to give the men a thorough rest. Driftwood was abundant, and very soon roaring fires were built, and a most agreeable odour of frizzling deer-

meat scented the air. It was some time since anybody had had a really satisfactory meal, and the deer did not last long; but some ptarmigan were shot, which made excellent soup for the next day.

On Monday morning, the twelfth of September, all hands were early astir; the camp was broken up, the boats were launched, and by 11.30 a.m. about sixteen miles had been made good. During the afternoon the wind rose, and for several hours all three boats ran before it; but the whale-boat travelled faster than the others, and about nine o'clock she was lost to view in the gathering darkness. For another hour the two cutters kept together; but little by little Chipp's boat dropped astern, and though De Long lowered his sail she did not reappear.

A tremendous sea was now running. The first cutter had much difficulty in keeping afloat, and a large amount of water came on board; but though her mast and sail were carried away, she managed to ride out the gale. The loss, though a serious one, was not irremediable, for, as soon as the weather permitted, a substitute for the lost sail was improvized from a sledge cover. This answered the purpose fairly well, and, after drifting helplessly for twenty-four hours, the boat continued her course. The new sail, however, did not conduce to rapid progress, and though the Siberian coast was now not far distant, four days of intense wretchedness dragged out their weary length before De Long's party sighted land.

For some hours the water had been shoaling, and when the cutter was still more than a mile from land she ran aground. The men shoved her off, and for hours endeavoured to find a practicable landing-place; but, try where they would, there was not enough water to float the boat, and even when the tide rose it made no appreciable difference.

To reach the shore that night was impossible, and in the morning, as the only chance of getting to land, a raft was constructed. Towing it ashore was terrible work, for the water was knee-deep and covered with new ice, through which the men had to push their way as best they could, for they were too much exhausted to raise their feet. The boat lay about a mile and a half from the shore, and when at last the men reached the beach two of them were so knocked up that, instead of returning for another load, they stayed where they were and built a fire of driftwood. Meanwhile, the rest of the raft-crew made their way back to the boat where De Long and three others awaited them; and then, having hauled the cutter farther inshore, they plodded back with their loaded raft. Again they returned to the boat, and pulled her nearer to the shore; but this time, instead of loading up the raft, every man took a bundle on his shoulder, and waded through the icy water towards the fire, which by this time was blazing up splendidly. A few things still remained in the boat, and, while supper was being prepared and the tent pitched, some

of the men went back to fetch them, thinking, most likely, that they might as well make one thorough wetting serve. When they returned supper was ready; but there was little comfort for the poor fellows that night, for the ground was so wet that before morning most of them were soaked to the skin.

De Long had arranged that, in the event of separation, each boat's crew should look after themselves, and make their way with all speed to a settlement; so as soon as the men had had a rest, the march began. Everything that could possibly be spared was abandoned; but that last terrible week in the boat had played havoc with the men's strength, and several of them were lame and disabled. Of these Ericksen was about the worst, and on the second day he could scarcely hobble along. It soon appeared, too, that the men's loads were too much for their strength, so De Long sent the ship's books and papers back to the boat, and left behind also a couple of tents and sundry other articles; but even then only a very short distance could be covered each day. To make matters worse, provisions were at a terribly low ebb: the biscuits had long been finished, the last tin of pemmican was in use, and the nearest settlement was miles away. What was to be done? The poor fellows could only plod along hoping for better days; but meanwhile Ericksen grew worse and worse, and one day, in the deadly lethargy of cold and weakness, he lay down in the snow to die. De Long managed

to rouse him up, but the poor fellow was worn out, and his companions were as unable to carry him as he was to keep pace with them.

The country did not seem to be utterly desolate, for a good many deer-tracks were seen, and here and there fox-traps were found. Traps implied somebody to set them; but neither man, woman, nor child was to be seen, though, after several days' tramping, the travellers reached a couple of deserted huts. This discovery was indeed a godsend, for the huts were in good condition; and when, a few hours later, Alexey shot two deer, things looked brighter than they had done for many a day. Rest, food, and warmth might do much to restore Ericksen and the other cripples; and De Long, who had been meditating sending one or two of the strongest men in search of help, decided instead to rest for a day or two, and then go on in company.

Three days' rest had a good effect, and then the march was resumed; but it was slow work, and an attempt to mend matters by making a raft proved a signal failure. There was nothing for it but to tramp on.

Day succeeded day with but little change in the state of affairs. One march was so like another that the chief difference lay in the growing weariness and weakness of the party. The deer were finished, and scarcely any pemmican remained. When that too was at an end, unless more game was found, there would be no

resource but to eat the dog, who still trotted along beside his masters. But just when the prospect looked darkest, a gleam of light came in the shape of a deer shot by Alexey. It was a fine buck, and in such good condition that for two or three days everybody had enough to eat—a state of things which unfortunately was becoming rather rare.

That human beings were not far distant was clear, for on one occasion some almost fresh moccasin tracks were seen, and a little farther on some scraps of meat lying scattered around a recently-extinguished fire were discovered. It was disappointing to be so near help and yet just to miss it; but it was encouraging to know that the region, desolate as it was, had inhabitants. There was always the hope of meeting them, and the brave fellows struggled on until on the twenty-eighth of September they reached a spot where the river forked, the two branches running at right angles to one another. It was necessary to cross one or other; but the streams were still unfrozen, and no wood suitable for a raft could be found. The position was a very awkward one; to retreat was useless, to advance was impossible, and, even on short commons, only a very few days' provisions remained. Autumn, however, was fast advancing; it could not be long till the river would freeze, and good-luck might again attend the hunters. De Long was naturally very anxious, but the case was not hopeless, and, cheery as usual, he tried to look on the

bright side of things. Meanwhile poor Ericksen was daily growing worse; a terrible ulcer was eating away his foot, part of which was already practically dead. All sensation was gone, and when the diseased portion was amputated the patient felt no pain whatever. Poor fellow! his days seemed to be numbered, and the doctor feared that lockjaw would set in.

After waiting for four days the travellers managed to cross the river; but the delay had been disastrous, for no more game had been obtained, and cold and hunger had further weakened the men. In spite of sharp frosts every night the ice was not yet to be trusted, as De Long and one or two of the others found to their cost, for one day it broke under them, letting them down into the water. No sooner had they scrambled out than their clothes froze stiff, and in this condition they walked on as best they could towards what looked like a hut, though closer inspection proved it to be only a mound of earth. The disappointment was a bitter one, but plenty of wood lay around, and a fire was kindled at which the frozen garments were thawed and dried. But not a bit of meat remained, and to keep life in their bodies the poor fellows were forced to shoot their dog, though one or two of them had little stomach for such a repast.

A terrible night followed. The cold was awful, and in spite of the fire the three who had fallen through the ice could get no warmth into them; but

at last morning came, and another weary march brought the hapless men to a hut which at least afforded shelter. The relief, however, came too late for Ericksen. It was evident that he was sinking fast, so De Long decided to remain in the hut for a time. He read the prayers for the dying; and then, though a furious gale was blowing, Alexey set off in search of deer, while the remainder of the party lay down to sleep. In this way two days were passed, but no deer or game of any kind could be got, and the daily ration was now reduced to half a pound of dog apiece, with a little weak tea, fortified occasionally by the addition of an ounce or two of alcohol. On the third day Ericksen died; but his comrades were too weak to bury him, so, cutting a hole in the ice, they dropped his body into the river, and marked the spot by setting up a board on which his name and the date were roughly cut. Then, having eaten their last morsel of food, they marched on with nothing to support life but some old tea leaves and two quarts of alcohol.

Once or twice Alexey shot a ptarmigan or two, and of these broth was made; but quantity and quality were alike deficient, and the starving men attempted to eat scraps of burnt deerskin. The case was growing desperate; and as a last resource Nindemann and Noros, the strongest of the party, went on in advance to look for help. The others followed more slowly in their track, barely keeping alive upon a little alcohol.

Once or twice they tried willow-leaf tea, but wood was scarce, and even the comfort of a good fire was not attainable at every camp. Human nature could endure no more, and one after another the poor fellows broke down. Alexey was the first to succumb; he held out as long as he could, but on the seventeenth of October he was manifestly dying of sheer hunger. The doctor baptized him that afternoon, and a few hours later he passed away. His comrades made shift to carry his body to the river and cover it with ice, but this time they had no heart to carve a memorial board. Unless game was found or help came, in a day or two they also would be sleeping their long sleep.

Two nights later Kaack was found dead between the doctor and De Long, having apparently died in his sleep. A few hours afterwards Lee also breathed his last; but the survivors were now too weak to make any attempt to bury them, and they were laid side by side in the snow.

Further advance was impossible. Having done their best, they could do no more, and calmly and patiently the dying men waited for the help that did not come. And so death found them. One after another they passed away, De Long, who recorded the death of most of the others, being probably the last to succumb.

The final entry in his journal was made on the thirtieth of October. Since the twenty-eighth of

that month Iversen, Dressler, Boyd, and Görtz had died, and Collins, when De Long wrote, lay dying. Nothing more than the bare fact was recorded; the writer's strength was exhausted, and all knowledge of the scenes and sufferings of those closing hours passed away with the noble fellows who, like England's greatest seaman, died in doing their duty.

> "In all their deeds heroic found as few,
> Nor faithful least in what they failed to do."

## CHAPTER X.

### LIFE AND DEATH.

WHEN Nindemann and Noros parted from their comrades they were under the impression that they had reached the river island of Tit Ary, and that the settlement of Ku Mark Surka was only twelve miles away. Unfortunately the map by which De Long had been steering, though the best he could get when he left America, was utterly unreliable. Tit Ary was still about a hundred miles away, while the supposed twelve miles from that island to Ku Mark Surka were in reality thirty-three miles. Of this the two men were, of course, in ignorance; and having been provided with a rifle and forty cartridges, they set out hopefully on their perilous journey.

Hardly had they started when their troubles began. Having little to carry and no sick to delay them, they moved much faster than the main body could do; but the travelling was very heavy, and, as they kept near the river, sometimes the ice broke under them and they had to wade. Having no change of clothes, it was all they could do to keep from freezing, especially

on one night when, soaked from wading streams and worn out by tramping through deep snow in the face of a furious gale, the wind blew their fire away as fast as they tried to light it. After several attempts they gave up the useless task, and having found a deep snowdrift, they set to work with their big knives, and after a good deal of trouble dug out a hollow large enough to afford them some shelter. To make matters worse food was very scarce. Once they saw some deer, but could not manage to shoot one, and for several days they subsisted as best they could on one ptarmigan, some burnt bones and leather, and a little willow tea.

On the fourth day they reached a hut, near which stood two crosses. At first the object of these was not clear, but eventually Nindemann, having found two corpses enclosed in boxes, concluded that the crosses were erected in memory of the dead. A more profitable and less ghastly discovery was another box containing a couple of fish, decayed, indeed, but just eatable, and these and a lemming made a sort of supper.

The men had now reached a most desolate region, where neither bird nor beast was to be seen. Fortunately Nindemann was wearing sealskin trousers, and pieces of these, having been well soaked and partly burnt, just kept life in the famished men, who contrived to swallow them. Night after night they camped in the snow, sometimes without even a fire;

and Noros, the weaker of the two, began to spit blood, while Nindemann could scarcely crawl. At length their exhaustion became so great that every few minutes they were forced to stop and rest; but, knowing that the lives of their comrades depended on help being sent, they struggled on, until on the nineteenth of October they reached a group of deserted huts. Hunting around for food they found some powdery stuff lying in a damaged kayak. So far as appearance went, it might have been anything, but investigation proved it to be mouldy fish, and in the extremity of their need they made shift to eat it. With such food it was hardly a matter for surprise that dysentery set in; and after three or four days, during which they were too ill to travel, they had not strength even to collect firewood. Fortunately a sledge or two and sundry other articles had been left in and around the huts, and with these the fire was kept alight.

In his many disappointments De Long used to console himself with the thought that it is always darkest before the dawn, and when Nindemann and Noros seemed to have reached their greatest extremity help came. Sitting one afternoon in the hut, Nindemann thought he saw something moving outside. Hope revived at the sight, and seizing his rifle he staggered towards the door; but, to his surprise, when he reached it a man stood before him, and a little way off was a sledge drawn by a team of rein-

deer. The new-comer seemed to be equally astonished. He was, moreover, terribly frightened at the sight of the rifle; but as soon as it was put aside he shyly entered the hut. The men offered him some of their mouldy fish, and Nindemann tried to induce him to barter his fur coat for a flannel shirt; but both offers were declined with emphatic gestures, though, after a little more dumb show, he accepted the shirt in return for a pair of boots and a deerskin. Then the visitor took his departure, explaining with more signs that he would return shortly.

In the course of the evening he came back. This time he was not alone; and having fed and clothed the famished men, the natives whirled them off on sledges drawn by reindeer to an encampment about fifteen miles distant. Here more kindness awaited the castaways. Not only were they fed and housed, but when one of the women found that Nindemann's hands were so crippled by the cold that he was almost helpless, she washed his face for him.

The language of signs had done very well so far, but it failed utterly when the men tried to make known that they were seeking help for their friends. Try how they would to make the natives understand, their attempts were fruitless; and the following day the camp was broken up, and the whole party set out for Ku Mark Surka. Here Nindemann's hopes rose, for it was a place of some size, and the inhabitants seemed intelligent; but again the absence of a common

language proved fatal. He spent hours in trying to make the people understand, but though sometimes they seemed to do so, the next moment it was clear that they were still in the dark. Finally he induced them to take him and Noros to a still larger settlement called Bulun, but before they started a Russian exile came on the scene. He was as little capable as the natives of conversing with the travellers, and could therefore do little to advance matters, though he seemed to have heard of the *Jeannette*, and was understood to say something about St. Petersburg and telegrams. All this was very vague and unsatisfactory, and finding verbal communication a failure, Noros wrote a letter which he hoped might eventually reach some one who could understand it. This the Russian pocketed, and the following morning he started for Bulun, whither Nindemann and Noros followed him.

Bulun was an important place, and boasted a Russian commandant, to whom, an hour or two after their arrival, the travellers were introduced. Though he was no better able than the others to talk to the new arrivals, he seemed to have some comprehension of their meaning; and when Noros, at Nindemann's dictation, wrote out a dispatch to the American minister at St. Petersburg, the commandant promised to deliver it safely to "the captain." Who this might be the sailors knew not—probably some superior official, they thought; and when the next day the

commandant set out on his errand, they remained quietly where they were, awaiting further developments. This suited them better than anything else just then, for though they were improving in health, they were far too weak to make any needless exertion.

On the third day a man came into the hut. He was dressed in fur, and supposing him to be a native, the men took no particular notice of him. But as soon as he began to speak, the voice and language were familiar. This could be no native; and looking up they recognized Engineer Melville, whom they had last seen in charge of the whale-boat on the night of the gale. They could scarcely believe their eyes—it seemed too good to be true; but there was more to hear and tell, and when the first surprise was over the three sat down to talk over their adventures.

After the boats parted, Melville ran for a time before the wind; but soon the storm increased so much, and such a quantity of water came on board, that the whale-boat was hove to, and, with the aid of a floating anchor, rode out the gale, the men sheltering themselves as best they could behind a canvas bulwark which they had recently constructed. When the wind subsided neither of the cutters were in sight, so Melville, acting on De Long's instructions not to wait for anybody, made sail, and taking a more southerly course than that followed by the first cutter, on the morning of the sixteenth of September

steered the boat up a broad stream, evidently one of the mouths of the Lena.

The river though wide was very shallow. More than once the boat grounded, and the men found it no easy matter to pick their way through the shoals, which in many places would not allow them to get near the banks. About seven in the evening a hut was seen close to the water-side, and as at this spot the stream was deeper, the boat was run ashore, and the men essayed to land. Not till then did they know how stiff and cramped they were. It was all they could do to crawl from the boat to the hut, and when a fire was lighted their half-frozen limbs ached and smarted terribly as the warmth caused the stagnant blood to circulate.

Two or three days later the whale-boat party, while continuing their journey up the river, fell in with some natives, who took them to their camp and put food before them. Melville tried to induce the strangers to conduct him and his men to Bulun, but this they declined to do; and though the travellers essayed to pursue their way alone, stress of weather drove them back to the camp. On their arrival they found that their native friends had thought fit to send for the starosti or headman of the village to which they belonged, and this person, being more amenable than his subordinates, was persuaded to act as guide.

Danger was now practically at an end, though

there was still much suffering and discomfort to be endured, for all the men were more or less frost-bitten. Boating was by no means the best thing in the world for them, and when they reached the village of Geeomovialocke very few were in a condition to make even a pretence of working. This euphoniously-named settlement was the most civilized place they had seen, and as the starosti gave up his house to them, they were quite comfortably lodged; but their own provisions were exhausted, and the villagers had not too much for themselves, so the next day they tried to push on.

Circumstances, however, were against them. A sharp frost had spread a thick coating of ice over the stream, and as a strong adverse wind was blowing, the two combined effectually prevented the boat from making any way. It was annoying, but things might have been worse; and the travellers returned to the village, where a hut was assigned to them, with a daily allowance of food, and—which pleased them less—an exile was quartered with them. But as beggars cannot be choosers, they made the best of everything—even of the food, which consisted partly of geese in an extremely bad state of preservation. So bad in fact were they that, especially in the absence of salt and vegetables, Melville feared that scurvy or typhoid fever might break out. That there was some danger of this could not be denied, but the rest and warmth more than counterbalanced

the inferior food, and most of the men began to improve in health. Meanwhile telegrams and letters in various languages were prepared and enclosed with some postage stamps in a water-tight case, which the accommodating starosti undertook to forward.

After several days' delay a Russian exile came to the settlement. He was an intelligent fellow, and as Melville could speak his language, communication became much easier. Being an exile, he was not at liberty to move about as he pleased; and when Melville desired to send him to Bulun to obtain assistance, before he could start several obstacles had to be overcome. The explorers, however, had conquered too many difficulties to be baffled by these, and in due time Kusmah started on his errand. During his absence Danenhower endeavoured to reach another settlement called Barkin, but the stupidity of the natives and the many difficulties of the way compelled him to return with his mission unfulfilled.

Kusmah in due time reached his destination, and there fell in with Nindemann and Noros, who being unable to understand his language, and having, of course, no notion that he was Melville's emissary, mystified him completely by their references to De Long's party, of whom he had never before heard. He also saw the commandant, who not only gave him letters and provisions for his employers, but promised to follow him immediately with sledges to fetch them to Bulun. Altogether the news brought

back by Kusmah was very encouraging to Melville and his companions. Their own troubles were at an end, and two of their comrades were safe; but then came the drop of bitterness in the cup of joy. What had become of De Long and the rest of his companions? Could they be still alive? Melville feared the worst, but in order that no time should be lost, he chartered a dog-team and native driver, and set off towards Bulun in the hope of intercepting the commandant, and getting him to send out a search-party. Much to Melville's disappointment, however, he somehow missed the commandant; but, though he knew it not, at that very time De Long and his companions were passing beyond the need of earthly help.

Meanwhile the Russian official reached Melville's quarters. Nothing could exceed his readiness to help, and after a conference with Danenhower, he sent a letter to Melville suggesting that the engineer should meet the party at a place called Burulak, which lay between Bulun and Geeomovialocke. To this Melville readily consented, and leaving Bartlett, the man who brought the note, at Bulun, he set out with a deer-team, provided by the commandant, for Burulak, where on the following day his friends joined him. A plan of operation was soon arranged. Melville, though suffering from the effects of cold and exposure, wished to go himself in search of De Long; and telling Bartlett to await his return at Bulun, he requested Danenhower to take command of the main party, and

make the best of his way to Yakutsk. The scheme was simplicity itself, but scarcity of means of transport interfered with its development, and six men, including Nindemann and Noros, were left at Bulun.

Meantime Melville with two dog-teams and their drivers and ten days' provisions set out on his search. During the first few days he retraced the route followed by Nindemann and Noros, and recognized many of the stopping-places which they had described. At first the drivers were exceedingly complaisant, but on the fifth day out they had had enough, and wished to return; but Melville told them he was going on at any cost, and his solemnly-uttered threat that, if provisions ran short, he would eat first the dogs and then their drivers, reduced the latter to abject obedience.

Melville himself needed all his pluck to carry him forward, for, weak and knocked up as he was, the cold soon took hold of him, and his feet became so badly frozen that he could neither walk nor wear his moccasins. But he would not turn back; and, having obtained fresh dogs and a small supply of provisions at a native settlement, he journeyed on until he reached the spot where De Long landed. Here he found the log-book and other articles which had been left behind; and then, having placed the whole assortment on his sledge, he retraced his steps to the place where he had obtained his relay of dogs. In return for the kindness shown him, he presented the natives with a number of the recovered articles; and then, with

fresh dogs, went in search of the hut where Ericksen died. This he could not find, and while making his way southwards his provisions ran out. The native drivers unearthed a store of bones which they had buried the preceding summer; and when, a few miles farther on, they were delayed a couple of days by a storm, they proceeded to regale themselves with the raw marrow. Hunger compelled Melville to join them, but as maggots and marrow were in about equal proportions, the delicacy made him exceedingly sick. As soon as the storm ceased the journey was continued, but the dogs, being weak from hunger, had great difficulty in making their way through the deep snow, and it was not until the twenty-seventh of November that Melville arrived at Bulun.

Finding that with the means at his command further search during the winter was practically impossible, Melville decided to go at once with the six men to Yakutsk. They reached their destination about the new year, and then, as it was useless for the whole party to remain in Siberia, Melville kept Nindemann and Bartlett to assist him in a further search, and started all the others on their homeward journey, under the command of Danenhower. This arrangement by no means met the approval of the homeward-bound party—they all wanted to stay and search; and when they reached Irkutsk they telegraphed to the United States for permission to do so. Finally it was arranged that five of the strongest men

should be attached to a search-party sent out by the navy department under the command of Lieutenant Harber; that Noros should accompany Mr. Jackson, the special correspondent sent by the *New York Herald* to Siberia; and that Danenhower, whose eyes still disabled him, with Newcomb, the steward, and the boatswain John Cole, should continue their journey to New York. Cole, poor fellow, was quite invalided, for his sufferings had unhinged his mind, and it became necessary to provide him with a special attendant.

Melville's first care was to search for De Long, and having carefully made his preparations, he and Nindemann started in one direction, while Bartlett set out in another. Both parties were hindered by a furious storm; but the men were now stronger and in better condition to face the weather, and after several days' search Nindemann and Melville reached a headland above the river, where the remains of a large fire were visible. Further search revealed a rifle supported on four sticks, the tops of which, as well as the muzzle of the rifle, appeared above the snow. Not far distant was a half-buried tea-kettle, and near this lay the bodies of De Long, Dr. Ambler, and Ah Sam, the Chinese cook. De Long's journal lay at a little distance from him. The other members of the party were found within a radius of a few hundred yards, the only missing one being Alexey, who died before the others, and had been buried on the river ice.

As the whole of the neighbourhood where the bodies were found was annually flooded, Melville decided not to bury his comrades where they fell, but to remove them to a little hill about seven miles distant, where their graves would be safe from the water. Thither he accordingly removed them, and having raised a cross over the grave, he left them sleeping peacefully amid the snows of the Lena delta. The United States government was, however, very properly, dissatisfied that the remains of the heroes should lie permanently in that far-distant spot, and Lieutenant Harber and his party were commissioned to bring them to America for interment.

Vigorous search was made for Lieutenant Chipp and his companions, but not a trace of them was to be found, nor had the natives along the coast seen anything of the cutter. They were gone—doubtless the boat had foundered in the gale; and brave, unselfish Chipp and his gallant comrades, "after life's fitful fever," "sleep well" in a grander sepulchre than mortal hands could raise for them.

## CHAPTER XI.

### FOLLOWING THE "JEANNETTE."

THE destruction of the *Jeannette*, followed by the death of De Long and his comrades, seemed for the moment to stamp the American expedition as one of the saddest failures in the whole story of Polar enterprise. For a time the ice had conquered; but a defeat is not necessarily a rout, and at the very moment when she was apparently utterly vanquished the gallant *Jeannette* did more to further the cause of Arctic exploration than she had done in all her voyages put together. She herself, it is true, disappeared utterly, without leaving so much as a broken spar or bit of timber to indicate that a ship had floated and sunk—one might almost say, had lived and died; but, of the many articles which had been carried on to the floe when the nip occurred, a certain number were left scattered about by the retreating crew.

Some of these, doubtless, followed the *Jeannette* to the bottom; others, in all probability, were eaten or carried off by predatory birds and beasts, but a select few escaped either of these fates. Years, however,

passed, and no one expected ever again to set eyes on any vestige of the lost ship or anything connected with her. But "the unexpected always happens," and one day in June 1884, some Eskimos, paddling about in their kayaks near Julianshaab, a Danish settlement on the south-west coast of Greenland, saw some strange-looking objects on a neighbouring ice-floe.

For anything to be seen on a drifting floe, except perhaps a seal or a walrus, was so unusual that the Eskimos' curiosity was excited. What in the world could the objects be? Being naturally inquisitive, the natives were at once seized with a desire to investigate, and on approaching the floe they found that quite a number of articles of various descriptions were scattered over it. What was more, all the things were of a useful nature; and the Eskimos, having collected them, took them to the colony, where the superintendent, Mr. Lytzen, shortly afterwards got wind of the discovery. The news excited his curiosity, and he carefully examined the various articles.

Evidently they had come from a wreck. But what wreck? As Lytzen turned over his treasure-trove light began to dawn on him. A manuscript list of the boats of the *Jeannette*, a catalogue of provisions written and signed by De Long, a pair of trousers marked "Louis Noros," could have come from one source only. The superintendent could hardly believe his eyes: before him lay unmistakable relics of the lost *Jeannette*.

He would not keep such interesting objects to himself, but sent them to a friend at Copenhagen, who in turn forwarded them to the International Exhibition at Amsterdam. At the close of the exhibition they were returned to Copenhagen in a wooden case, which for some time remained unopened at the house of Lytzen's friend. The story of the derelicts, however, travelled northwards, and so much interested a young Norwegian zoologist named Fridtjof Nansen that, as soon as he could do so, he went to Copenhagen. Unfortunately he arrived too late, for the gentleman to whom the case had been consigned was dead, and his wife, not considering its dilapidated contents of any value, had destroyed them, and Nansen had therefore no means of verifying the story.

The discovery, however, set him thinking. There could be no reasonable doubt that the relics were genuine; and that being admitted, it followed that they must have drifted from the spot where the *Jeannette* sank, north-west of Henrietta Island, right across the Polar basin, until, coming within the influence of the East Greenland current, they were carried round Cape Farewell, and again wafted northward up the west coast. The subject was an exciting one to any scientific mind; to a descendant of the "old Viking brave," like Nansen, it had a special and absorbing interest, and he began to hunt up other evidences of the supposed new Arctic current. These were not long in coming to hand—they were in fact

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ready made, and merely awaited the advent of one who had eyes to see and a mind to understand.

First of all, in the ethnological museum at Christiania there is an Eskimo throwing-stick, picked up on the shore near Godthaab, but of a make peculiar to the inhabitants of Alaska, and decorated with Chinese beads such as the Alaskan Eskimos obtain from their Asiatic neighbours. Secondly, on the coasts of Greenland and Spitzbergen, and on the ice near Jan Mayen, pieces of driftwood—chiefly Siberian larch and red spruce—are often to be seen. Neither throwing-sticks nor timber travel spontaneously, so, in the absence of other means of transit, it seemed to Nansen only reasonable to refer their presence in the localities named to some current powerful enough to carry them right across the Polar basin.

Again, though the thickest floe-ice observed by De Long was seldom or never more than ten feet thick, some of the palæocrystic floes encountered by Nares in Robeson Channel were from eighty to one hundred feet in thickness. Some reason for so great a difference must certainly exist, and it occurred to Nansen that the ice which formed in the neighbourhood of Behring Strait and the New Siberian Islands must drift across the Arctic Ocean, increasing constantly in thickness until, by the time it reaches Greenland waters, it attains the immense bulk described by explorers on that side of the Polar area.

So many proofs might fairly be taken as conclusive

evidence of the existence of a current extending across the whole of the Arctic Ocean, but Nansen had more circumstantial evidence with which to convince the sceptical world. While endeavouring to land on the east coast of Greenland in 1882 he collected various specimens of mud and dust from the drifting floes around. These samples he carefully preserved, and eventually submitted to the Swedish geologist Dr. Törnebohm, who, having analyzed them, arrived at the conclusion that, wherever they might have been found, they came originally from Siberia. Other specimens of dust from the floes were submitted to Professor Cleve of Upsala, who had made an exhaustive study of diatoms. He reported that the diatoms contained in this dust were quite peculiar, and different from any others that he had examined except one, "which," said he, "was collected by Kjellman (during the *Vega* expedition) on the floe-ice at Cape Wankarema, near Behring Strait."

From the united testimony of the wreckage from the *Jeannette*, the throwing-stick from Alaska, and the dust and diatoms from Siberia, Nansen proceeded to evolve a new and original scheme of exploration. If floes could be thus conveyed, he argued, why not a ship?—supposing, of course, that it got into the ice at the right place, and could survive the nips and squeezes to which it would most certainly be exposed. The getting into the ice was easy, but the construction of a suitable vessel was a different matter. The word

"impossible" had, however, no place in Dr. Nansen's vocabulary. His motto was "Forward," or, as his own language puts it, "*Fram;*" and, believing firmly in the practicability of his scheme, he set himself, with the assistance of Mr. Colin Archer, a Scotch-Norwegian shipbuilder, to solve the problem of how to build a ship which should be stronger than Arctic ice.

The construction and equipment of such a ship would require a good deal of money, but Nansen's Greenland achievement had won for him the almost boundless confidence of his countrymen, and the Storthing did not hesitate to vote the large sum of 200,000 kroner—about £11,250 in English money—towards the expenses of the proposed expedition. From other quarters also contributions poured in, including £300 from the Royal Geographical Society of England, and Nansen soon found that there would be no difficulty in raising the funds required.

The building of the ship went forward merrily. Her hull was of enormous strength—nowhere were her sides less than twenty-eight inches thick—with frame timbers of old, well-seasoned, naturally-curved Italian oak, almost as hard as iron, knit together by beams, stays, and strengthenings of every imaginable variety, crossing the ship in all directions. This massive frame was sheathed with three layers of planking—two inner ones of oak, and an outer one of green-heart, a strong, slippery wood not likely to be easily injured by ice. The decks, too, were of

unusual solidity; in fact, when she was finished and calked with oakum and pitch, a solid block of wood could hardly be more compact and uncrushable than Nansen's ship.

In shape the vessel was quite out of the common. She was pointed at both ends, and as her curved, sloping sides were free from any projections which could give the ice a grip, her designers expected that, as the floes closed upon her, they would, instead of crushing her, merely force her upwards until she rested on the top of the ice. She was schooner-rigged, with rather lofty masts, and was provided with an excellent engine of 160 horse-power—quite sufficient for her needs, as to attain a high rate of speed was no part of her mission.

Nansen was of opinion that a big ship was not only proportionately weaker than a small one, but also less easy to handle among the ice. His new vessel was therefore of no great size—just large enough, in fact, to accommodate her crew of twelve or thirteen men, and to carry the stores necessary for five or six years' sojourn in a region where no shops exist. Altogether she was an eminently compact and practical little ship, with few pretensions to beauty, though by way of affording a little variety to the dazzling whiteness of the Arctic snows she was painted green, grey, scarlet, and white, with a liberal allowance of gold. When completed she was an ideal Arctic ship, and Nansen most appropriately named her *Fram*.

Her interior arrangements were remarkably snug. The saloon, which was to serve as a general living-room, was in the middle, and being surrounded by sleeping cabins, the galley, and the coal bunkers, was effectually shielded from cold. The ship's sides were well cased with tarred felt, cork, a wooden wainscot, then more felt covered with linoleum, and lastly another wainscot. As the bulkheads were similarly treated, there was little fear that any great amount of cold would be able to penetrate them. Thus, when duly provided with good stoves, the electric light, plenty of bearskins and carpets, and all other modern conveniences, the *Fram* promised to be a really desirable Polar abode.

The next consideration was the equipment. As the purpose of the voyage was the furtherance of science, all instruments necessary for the accomplishment of this end were most carefully selected. Nansen fully believed in the wisdom of the idea contained in the saying, "Penny wise and pound foolish," and accordingly he spared no expense in getting everything of the best quality. He extended this care to his provisions; not only were all the stores selected on strictly hygienic principles, avoiding everything which could possibly provoke or induce scurvy, but every article, before it was passed, was subjected to the strictest analysis.

The ship's company, also carefully selected with regard to their fitness for the work, consisted origin-

ally of twelve men, foremost among whom were Dr. Nansen himself and his old friend and comrade Otto Sverdrup, who was to act as captain of the *Fram*. The other members of the little commonwealth were Sigurd Scott-Hansen, lieutenant in the navy, who filled the responsible posts of meteorologist, astronomer, etc.; Henrik G. Blessing, doctor and botanist; Theodore C. Jacobsen, mate; Anton Amundsen, engineer; Adolf Juell, who, though he held a captain's certificate, shipped as cook and steward; Lars Pettersen, nominally smith and machinist, but sometimes cook; Frederik H. Johansen, a lieutenant in the army reserve, who, rather than be left behind, accepted the post of stoker; Peter L. Henriksen, harpooner; Bernhard Nordahl, electrical engineer; and Ivar O. J. Mogstad, who gave up a good post as warder in an asylum to become ship's carpenter. To these was afterwards added Bernt Bentzen, a jolly, good-natured sailor, who joined the expedition at Tromsöe. His original intention was merely to go as far as Khabarova, but by the time that settlement was reached Bentzen was so well pleased with his surroundings that he stayed on board.

Last, but by no means least, in preparing for such an expedition, it was necessary to secure some good sledge dogs. These could not be obtained in Europe, but a Siberian traveller, Baron von Toll, who naturally had an extensive acquaintance with such matters, promised Nansen to procure them from the Ostiaks

of Western Siberia, and send them to Khabarova, where the *Fram* was to call for them. As the dogs used in Eastern Siberia were supposed to be even better than their western brethren, Von Toll also arranged that a team should be obtained from the Tungus tribe, and sent to the mouth of the Olenek River, where they were to await the arrival of the *Fram.* The same kind friend also provided depôts of food and stores on the New Siberian Islands, so that, should the *Fram* meet with disaster in that neighbourhood, her crew need not fear the sad fate which befell the retreating crew of the *Jeannette.*

## CHAPTER XII.

### INTO THE ICE.

MIDSUMMER Day 1893 dawned dull and gloomy over Christiania Fjord, where the *Fram* lay at anchor. All was ready, and crowds of people were coming and going, saying good-bye to their friends, and taking a last look at the gallant little ship that was to carry the explorers into the icy fastnesses of the unknown north. The bustle was at its height when the *Fram's* petroleum launch with Nansen on board came puffing up alongside, and then the decks were cleared, the anchor was weighed, and silently and solemnly, as though she was conscious of the responsibility which rested on her, the *Fram* dropped down the fjord.

The expedition called forth the greatest interest throughout Norway, and at Bergen, Trondhjem, and other ports where the *Fram* called, banquets and receptions were the order of the day. Every vessel she met saluted her, and even the fisher people from the little hamlets on the coast turned out to wave to her and give her plucky crew a cheer. The last calling-

place on Norwegian soil was Vardö, a small seaport at the mouth of the Varanger Fjord; but even at that out-of-the-way spot the inhabitants mustered in force to see the *Fram*, and to feast Nansen and his comrades. Here the last preparations were made, the pilot went ashore, and then the explorers left Europe behind them, and steered eastward across Barents Sea.

Four days' sailing brought them within sight of Goose Land. Hitherto the weather had been very foggy, but the sun shone out and the fog disappeared just in time to cheat the sportsmen into planning a raid on the geese. Those geese were, in anticipation, already smoking on the table, when down came the fog again like a thick white pall over sea and land. Goose-shooting was now out of the question, and as time would not permit of any long delay, the *Fram's* head was turned southward, and in the teeth of a strong wind she steamed direct for Yugor Strait.

Fog still shrouded everything, and on the twenty-seventh of July, much to the surprise of her crew, the ship suddenly plunged into pack-ice. It was an anxious moment; how would she behave? The first pack offered little resistance, but a few hours later heavier and more closely-packed ice caused some delay. The continuance of the fog did not tend to improve matters; but just at the right moment the mist lifted, and the little *Fram* forced her way through the

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opposing pack, breaking one floe, shoving another aside, squeezing between two more, and seeming to take to ice as kindly as a duck does to water.

At last the ice was left behind for a season, and on the evening of the twenty-ninth of July the *Fram* dropped anchor opposite the settlement of Khabarova. As she neared the harbour, a forlorn-looking wreck or two lying on the beach warned Sverdrup that the harbour of Khabarova was not the safest in the world; so the ship was anchored at some distance from the shore. Hardly was this accomplished when a boat came alongside, and in a few minutes its occupant, a fine-looking fellow, more like a Norwegian than a Samoyed, scrambled on board. He introduced himself as Trontheim, Von Toll's messenger, and went on to inform Nansen that he had been successful in his mission to the Ostiaks, and had obtained a number of fine dogs. This was good news indeed, and as soon as possible several of the ship's company set off to visit their future companions. The inspection was most satisfactory: the dogs, though evidently of different breeds, were all handsome, good-natured-looking animals of distinctly prepossessing appearance. Their gentleness, however, was not a highly developed characteristic. Among themselves they were perpetually quarrelling, and one day several of them, while out with Trontheim and Nansen, set upon a Samoyed dog whose appearance somehow had displeased them, and it was only with the greatest

SAMOYEDS OF KHABAROVA.

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difficulty that the two men were able to save the unlucky victim.

Nansen had arranged that an additional supply of coal should meet him at Khabarova, and while waiting for it he and Sverdrup took the opportunity to explore Yugor Strait in the steam launch. Shoals and drifting floes abounded, but the launch passed safely through the strait, and reached the Kara Sea. Here the prospect was decidedly encouraging: there was a good deal of ice on the horizon, but between the ice and the coast there was plenty of open water, just where it was wanted. Having ascertained this, they put the launch about; but as she was returning through the strait her propeller struck against a submerged rock, and away went one blade. The accident was annoying; but, though a one-bladed screw made progress rather jerky, the launch proceeded gaily, until the lead-line by some means entangled itself in the machinery. Then came a whiz and a clatter, followed by a shower of broken springs, a sudden stop, and a general smash-up, serious enough to throw the whole thing out of gear for the time being, and to entail several hours' hard work for the engineer.

The launch seemed doomed to come to grief in Yugor Strait. The coal did not come, and, after waiting as long as he dared, Nansen decided to go without it, as he had a good stock on board. Just as the *Fram* was about to start, a fog came up; and,

warned by previous experience, Nansen and Scott-Hansen led the way in the launch. They had not gone far when a sudden lurch of the boat upset some oil, which at once caught fire. The flames quickly spread to Nansen's oily garments, and then ran along the bottom of the boat, licking up sundry pools of oil, and finally surrounding and setting light to a big bucket of petroleum. Leaving the engine for a moment to its own devices, Nansen sprang to the bow, and, having put out the fire in his clothes, turned his attention to the bucket of oil, which, regardless of severely-burnt fingers, he threw into the sea, where, spreading itself over the surface, it continued to blaze fiercely. He then had time to attend to the flaring oil at the bottom of the boat, and, seizing the bailer, he dashed water on it until all danger of further conflagration was at an end.

For several weeks after leaving Yugor Strait the *Fram* coasted along the Siberian shore, often battling with the ice, and sometimes being stopped altogether. The first of these delays occurred on the fifth of August, when, having crossed the Kara Sea, the explorers reached Yalmal Peninsula. Here the ice was packed close up to the coast; and, while waiting for it to open, a party went ashore, though the water was so shallow that they were forced to wade the last part of the way. The peninsula, however, was not very attractive: fog, as usual, shut out any distant view; and the immediate neighbourhood consisted of

level stretches of wet sand, varied here and there by water-pools separated by ridges. Neither animals nor trees were to be seen, and the only signs of life were a few scattered flowers and an occasional snipe. Yet even in this dreary place human beings contrived to exist, for the next day a couple of Samoyeds came on board the *Fram*, and gave the explorers to understand that they were living in a tent at a little distance from the coast. This event was chiefly memorable for the fact that the visitors were the last people encountered until the *Fram* returned to civilization.

After delaying the ship for several days, the ice cleared off; and, in spite of contrary winds, which blew steadily for some time, and raised an inconveniently heavy sea, the gallant little *Fram* pushed forward, and about this time began her career of discovery. The mouth of the Yenisei was not far distant on the starboard bow, when Sverdrup one day saw land where the charts showed nothing but sea. The island thus discovered had probably been hidden from previous exploring parties by the prevailing fog; but there it undoubtedly was, and in compliment to Sverdrup it was named after him.

A few days later the *Fram* was steaming past the Kjellman Islands, when Jacobsen shouted that he saw reindeer; so a boat was lowered, and Jacobsen, Nansen, and several others went in pursuit. In due course some deer were found, but there was next to no cover, and stalking, in consequence, was not likely

to be a success. At last Nansen, who was alone at the time, contrived to get within range; but it was then nearly dark, and the only effect of his shot was to send the animals bounding away in headlong flight. Soon afterwards he fell in with three or four of his companions, and joined forces with Sverdrup; while the others, disgusted with their non-success, gave up the chase. The two persevering huntsmen went on for some time, and then their patience was rewarded by the discovery of six deer which had evidently not seen them.

Judiciously creeping forward, Sverdrup fired, and the startled deer fled in Nansen's direction. Springing forward to meet them, he more than once measured his length among the stones; but, getting within range, he fired at a fine buck, and hit him in the leg. For a few minutes the rest of the herd seemed puzzled; but, when another deer was hit, the uninjured animals again took flight. Nansen followed at their heels; but the pace was too much for him, and, finding that he could not keep it up, he turned to secure the two wounded animals. One of these, as he approached, made off on three legs at an astonishing rate; but the chase ended in the death of both victims. A couple of bears were shot also.

The hunters now began to think of returning to the *Fram* with their spoil, but during their absence the rising tide had swamped the boat. Its contents were completely soaked, and the boat itself had only

escaped injury by reason of the beach being too soft and sandy to do any damage. Having bailed out the water, and eaten some sodden biscuit, the sportsmen put the two bears into the boat, and then rowed along the shore towards the bay where the reindeer had been left. Wind and tide were against them; and when, after a hard pull, they reached the spot where the animals lay, a heavy surf made it utterly impossible to get them on board; and, to the supreme disgust of the party, they were forced to put off without their hard-won spoils.

Even yet their troubles were not at an end. As they neared the ship, a strong current drove the boat back; and, pull as they would, it was all they could do to maintain their position, let alone to advance. Matters began to look serious; but, when the weary men were almost in despair, their comrades on board the *Fram* saw their difficulty, and threw out a buoy attached to a rope. It fell at some distance from the boat, but by making a desperate effort they reached it, and were soon hauled alongside.

After this innumerable new islands were discovered, but when the *Fram* endeavoured to pass between them she was unceremoniously stopped by heavy ice. The pack seemed to extend indefinitely to the northward; and, finally, the ship was reduced to the necessity of creeping ignominiously along the edge of the ice, where much annoyance was caused by a surface layer of fresh water, which, as the ship ad-

vanced, glided forward with her, slipping easily over the heavier salt water beneath. This curious phenomenon was observed for some time, and the *Fram* did not get clear of the "dead water" until a storm broke up the ice sufficiently to allow her to force her way through the pack.

Shortly before Cape Chelyuskin was reached, the ice again caused an obstruction, which Nansen turned to account by taking a trip ashore. But the neighbourhood was not particularly interesting, and as the eye ranged over the clay plains which extended for miles, it rested on little except huge masses of granite, porphyry, and other rocks, whose presence was evidently due to the action of the ice in some far-distant age. A couple of days afterwards the ice relaxed, and on the tenth of September the *Fram*, having passed several more new islands, successfully rounded the cape, but beyond it heavy ice again opposed her.

Now came a break in the monotony of life, for while passing through this pack some one espied several walruses basking temptingly on a neighbouring floe. The attraction was too great to be resisted; guns were got ready, harpoons sharpened, a boat was lowered, and Henriksen, Nansen, and Juell pulled cautiously towards the monsters. As the boat approached the floe Henriksen's harpoon whizzed through the air; but his aim was imperfect, and the weapon glanced harmlessly over the backs of the monsters,

some of whom roused themselves, and, bellowing angrily, moved to the edge of the ice. At that moment Nansen raised his gun, and, taking careful aim, fired at one of the huge brutes. The creature staggered for an instant, and then rolled heavily into the water as another shot rang out and a second walrus, also severely hit, floundered into the water, followed by the rest of the herd.

A most appalling turmoil ensued. The unwieldy creatures splashed and roared round the boat, threatening to capsize her or dig their tusks through her planks and sink her, while the water for yards was lashed into foam by their wallowing. Nothing, however, came of the commotion; and while it was at its height Nansen fired again—this time with fatal effect, for one of the walruses previously wounded rolled over stone-dead. Henriksen lost no time in securing the monster with a harpoon or two, and then the second of the wounded brutes was in like manner slain and made fast. Had more harpoons been available, several others might have been obtained, but a third which was shot sank before the *Fram* arrived on the scene and took the hunters and their quarry on board.

Two or three days after this encounter, the *Fram* reached the mouth of the Olenek, where the Tungus dogs were awaiting her. But the estuary was encumbered with numerous shoals, on which, imperfectly charted as they were, the *Fram* might easily run aground; and, as navigation could not be expected to

remain open much longer, Nansen dared not risk delay. To be frozen in at the mouth of the Olenek would altogether upset his calculations; and so, as the lesser of two evils, he decided to leave the dogs where they were, and steer for the New Siberian Islands.

For a few days the *Fram* found nothing but open water, and with a favourable wind she made rapid progress. The hopes of her crew rose proportionately. If only this state of things would last for a week or two, they might penetrate farther north than ever ship had gone before. *If*—it is a little word, but it was too big for the *Fram* and her eager crew, for on the twentieth of September the open water was replaced by an apparently boundless ice-pack, stretching northward, eastward, and westward as far as the eye could reach.

What was to be done? Nansen would have preferred to go eastward, but in that direction the edge of the ice appeared to have a southerly trend; so the *Fram* was turned to the west, and coasted along the ice until, on the following day, she reached a point where further advance was impracticable. It was evident that the season for navigation was at an end; so the ship was made fast to a huge block of ice, and in a few days was completely frozen in.

Preparations for winter now began in earnest. The rudder was hauled up out of harm's way, the machinery was cleaned and oiled, and sundry workshops were fitted up in various parts of the ship. All odd

jobs, however—including shoemaking and tailoring—were carried on in the saloon, which was also the general dining and sitting room.

Among other modern conveniences, the *Fram* possessed an electric dynamo, worked by a windmill whose sails were so constructed that the lightest breeze would keep them revolving. This machinery was now put in working order, and with electric light and plenty of lamps at command, the coming winter night was shorn of half its terrors.

## CHAPTER XIII.

### LIFE ON BOARD.

WHEN the *Fram* was finally stopped by the ice, fog, as usual, obscured everything. Her position could not, therefore, be definitely ascertained; but Nansen calculated that she had reached 78½° north latitude or thereabouts. This was good, so far as it went, more especially as the ice was evidently drifting northwards, since, on the twenty-ninth of September, it was found that the seventy-ninth parallel had been crossed. With October, however, contrary winds set in and drove the *Fram* south-westward, until, at the end of the first week in November, her latitude was only 77° 43′ north. But again luck changed, and in due time the wind began to blow steadily from the south or south-east, and the *Fram* not only recovered lost ground, but gradually crept towards the Pole.

Daylight meanwhile had been steadily decreasing, and on the twenty-sixth of October the sun finally sank below the horizon. By this time the crew were getting used to their surroundings, and had settled down to a

daily routine, which, if it offered no special excitement, at any rate promised comfort. Breakfast, on the liberal scale usual in Norway, was served about eight o'clock, and when the meal was finished every one went about his work. There were the dogs to feed, provisions and ice to take to the galley, shoes and clothes to make or mend, and sundry other domestic duties to perform, while Nordahl generally had something to do to the electric light machinery. Besides these very prosaic occupations, a good deal of time was also spent in scientific work, and Scott-Hansen, Nansen, Johansen, and Blessing, the chief scientists of the expedition, found their hands well filled. In his own proper department Blessing had little or nothing to do, for the whole crew continued so supremely well that the post of surgeon was a sinecure, and, except now and then among the dogs, he seldom found a patient. At one o'clock dinner was ready, and in the afternoon, after a pipe and an hour's rest, those who had still work to do returned to their labours until six o'clock, when they all sat down to supper. Then, except for continuing the meteorological observations, which were taken at regular intervals day and night, work was done, and the rest of the evening was spent in whatever amusement seemed good to the company. For the sake of the dogs it was not thought safe to leave the ship unwatched at night, so when about midnight all hands turned in, some one always remained on guard, to be

relieved in an hour's time by the man whose name came next on the roster.

During the autumn and early winter bears frequently came to the ship, and a good many were killed. One night, when all the men were below, a great commotion was heard among the dogs which resided on the deck. It was suspected that a bear might have been the cause of the disturbance, but nothing unusual was to be seen, and though Henriksen noticed that three dogs were missing, he supposed that they had gone hunting on their own account.

In the morning, as they were still absent, Mogstad and Henriksen took a lantern and went in search. They soon came back helter-skelter, and Mogstad scrambled on board with more haste than dignity. Henriksen was less fortunate, for as his wooden-soled shoes were ill adapted for rapid locomotion over the ice, he made slower progress. Just as he reached the ship a bear, which was the cause of all the commotion, overtook him and gave him a nip in the side, fortunately without seriously hurting him. Turning sharply round he dashed the lantern in the bear's face, sending fragments of glass and metal in all directions. While Bruin was getting over his astonishment, Henriksen took the opportunity of making his escape and scrambling on deck. Balked of his prey, the bear turned his attention to a dog who incautiously came within reach, but while he was occupied with

this new victim a well-aimed shot from Nansen stretched him lifeless on the snow.

The intruder being thus disposed of, another search was made for the missing dogs. The cause of the commotion during the night now became apparent, for, not far from the ship, the dead and half-devoured bodies of two dogs were discovered. Evidently the bear had found his way on board, seized the poor dogs, and dragged them away. The third dog was still missing. No sign of him, alive or dead, could be seen, and his fate remained doubtful until the next morning, when Johansen heard a distant howling, and some time later the wanderer came alongside quite ready for his breakfast.

One way and another the dogs were a constant source of amusement. Their chief fault was their ingrain love of fighting, and, though perfectly gentle to their masters, an intermittent internecine warfare was carried on, and sometimes, in particularly violent battles, the weaker combatant was actually torn to pieces. The dogs seemed to form themselves into cliques and companies, and when one dog gave offence in any way, the whole pack would set on him and summarily avenge the insult.

The *Fram* had not long been frozen in when the ice began to crack and groan in a most alarming manner. Much of this ice movement was caused by the currents and tides; and, consequently, at the spring tides the motion was greatest, and the ice was

squeezed and jammed together with a tremendous force, which often raised the *Fram* several feet, letting her return to her original position as the nip relaxed. Any other vessel would probably have been crushed like an egg-shell, but the little *Fram*, "round and slippery like an eel," contrived to slide out of the grip of the ice, just as Nansen had expected that she would do. At first, as was natural, her crew were somewhat alarmed by this mighty commotion, and used to stand breathlessly watching the progress of the ice-battles; but in time the interest palled, and, instead of rushing on deck when a pressure began, they stayed in more comfortable quarters below.

As winter advanced the cold became intense. The lowest temperature recorded during the first winter was — 63°, and for many weeks at a stretch the mercury was frozen. The *Fram's* crew, however, seemed one and all to be almost impervious to cold, and sometimes with 40° or 50° of frost they found that the lamp sufficiently warmed the saloon without the aid of a fire. Even out of doors the cold did not trouble them, and, though abundance of fur clothing had been provided, they generally preferred woollen clothes, over which a wind-and-snow-proof canvas suit was worn when occasion demanded.

Christmas passed happily, and the new year dawned on hearts that beat high with hope, for each day the *Fram* drew a little nearer to her goal. The worst part of the winter night was past, for early in

January darkness began to give place to twilight, and towards the end of the month the sharp-sighted could just manage to decipher newspaper type out of doors at noon. A few days later the eightieth parallel was crossed, and this naturally gave occasion for a little festival of the only kind possible—namely, a superior dinner.

As the light increased sounding operations, which the exigences of winter had partly if not wholly suspended, again became possible. Hitherto every one had supposed that the Polar basin was generally shallow, and it was therefore a great surprise when, on the first of March, the whole sounding line, about 2,000 fathoms, ran out without reaching bottom. There was no more line of a suitable kind on board, but the explorers were equal to the occasion. If they had no more sounding-line, they had plenty of steel-wire cable, and this when unravelled supplied plenty of material from which an excellent line was constructed. After this soundings were often taken, and depths varying from 1,800 to 2,100 fathoms were recorded.

During August the explorers obtained some rather remarkable sea temperatures, due, no doubt, to the influence of the Gulf Stream. So near the Pole, they naturally expected to find the temperature of the water very low, but this was not the case. At a depth of 2,077 fathoms the thermometer recorded 30·85°, and even in the coldest stratum, between

21 and 43 fathoms from the surface, 29·3° were registered.

With returning spring the death-like silence and solitude of winter, when not even an enterprising bear visited the ship, passed into the limbo of things forgotten. On the twenty-third of January a walrus showed himself near the ship, but though one or two of the dogs gave notice of the visit, and Nansen somewhat inhospitably rushed out with his revolver, no capture was effected. Then came sundry gulls, some of which, including three specimens of the rare variety known as Ross's Gull, were shot by Nansen and triumphantly added to his collection. The bears, with commendable prudence, still gave the ship a wide berth, but about the end of August Blessing saw one rolling in the snow a little distance from the *Fram*. He and Johansen got their revolvers, and waited patiently as Bruin came nearer and nearer, until at last he was within range. Then two shots rang out, and the next moment Bruin fell lifeless. This bear was the forerunner of many more, and during the next three or four months men and dogs joined in many an exciting chase.

The oldest puppies were now of an age to begin to work for their living, and their initiation into the mysteries of hauling was begun. This was at first most repugnant to their feelings, and each attempt to harness them caused a good deal of commotion and many upsets to sledges and drivers; but in the end

the recalcitrant puppies settled down to the inevitable, and became excellent workers. They were not the only learners, for a few of the men who had had little practice in the use of ski now set to work to acquire the art.

As winter was approaching, a few alterations and improvements were made in the arrangements of the *Fram*. One of these was the permanent location of the dogs in snow kennels outside the ship, an arrangement which gave more room on board and added considerably to the comfort of all concerned. Not less advantageous was the invention by Nansen of a new cooking apparatus to burn coal oil, of which the *Fram* possessed a large but hitherto unutilized supply. After the first day, when the apparatus indulged in a few preliminary fireworks, it worked splendidly and gave general satisfaction, especially as several additional tons of petroleum were rendered available for the lamps.

The drift during the summer had not been by any means all that could be desired. Up to the middle of June all had gone well, and by the eighteenth the *Fram* had reached 81° 52′ north latitude; but after that date north-west winds drove her back, and she did not cross the eighty-second parallel until the twenty-first of October. Long before this it had become apparent to Nansen that there was not the slightest hope that she would reach the Pole. His most sanguine expectations did not now contemplate the attainment of

more than the eighty-fifth parallel, though he took it for granted, from the general direction of her drift, that the ship would be carried round the northern extremity of Franz Josef Land.

But he was not satisfied. To be "so near and yet so far" was tantalizing, and little by little a new plan began to take shape in his mind. Why should not he and, say, one companion, travelling on ski and accompanied by a good team of dogs, manage to reach the Pole? It was a daring scheme, and one that perhaps would not have been entertained for a moment by anybody but Nansen; but he believed in himself and in the possibility of carrying out the idea. Everybody had said that the inland ice of Greenland could never be crossed, but he had accomplished the feat; why should he fail now?

The difficulties to be overcome on such a trip were, of course, enormous. First of all the Pole, or, in default of the Pole, the highest attainable latitude, having been reached, it would be impossible to return to the *Fram*, seeing that the extent and direction of her drift during the absence of the explorers would be unknown to them. It would be necessary therefore to retreat over the ice to Franz Josef Land or Spitzbergen, as might be most convenient. Having accomplished this, it was not likely that there would be much difficulty in finding a ship to take them home, as the seas in the neighbourhood of Spitzbergen are yearly frequented by Norwegian walrus hunters.

After some consideration Nansen finally decided to make the attempt. Then came the question—When should he start? Manifestly spring was the proper season for such an undertaking, and, as there seemed every likelihood that another year's drift would carry the *Fram* too far to the westward, after conferring with Sverdrup he decided to start early in the ensuing spring. The idea at once commended itself to Sverdrup, and the two would gladly have made the journey together, but they could not both leave the ship. It was therefore decided that Sverdrup should take sole charge of the *Fram*, and that Nansen and one of the others, with dogs to haul the sledges, should go northward over the ice. The chief difficulty would be to carry sufficient provisions, and though as soon as they reached land game of some kind would doubtless be procurable, Nansen feared that the dogs' food would not hold out so long. Should this be the case, there would be no choice but to kill some of them to feed the others.

Sverdrup not being available, it was necessary to choose some other companion. Who should he be? Scott-Hansen was in charge of an important scientific department, and could not be spared from his post. Blessing was similarly situated; and several others were not sufficiently at home on their ski. Johansen, however, was a good, all-round man, and an expert skilöber; moreover, his duties as assistant to Scott-Hansen could be transferred to somebody else. Nansen

therefore selected him; and this matter being arranged, other preparations were busily carried forward.

Meanwhile the *Fram* was steadily drifting northward. On the twelfth of December she reached 82° 30′ north latitude—the most northerly point attained, so far, by any ship; and by Christmas she had crept on to the eighty-third parallel. This was indeed a triumph; and on New Year's Day 1895 everything seemed to promise that the coming year would bring success to the *Fram* and her crew.

But a time of trial was at hand. The ice had never been quiet for long, but hitherto its roars and uneasy movements had not, after the first experience of its eccentricities, excited any alarm. Early on the morning of the third of January, however, a serious pressure began, and sundry loose articles which had been lying about on the floe were hurriedly brought on board. As the day went on the immense force with which the ice was being compressed formed a huge hummock on the port side of the ship, and drove it by slow degrees nearer and nearer to her. Meanwhile the ice all around cracked and roared with a deafening noise, and fearing the worst, the explorers began to make preparations for leaving the ship. Sledges, kayaks, and provisions for dogs and men were placed on deck or on the floe; and later in the evening, as the kennels were flooded, the frightened dogs were brought on board.

The next day the state of the ice showed little

alteration, except that the ridge had advanced rather nearer to the ship. If it continued its course even the *Fram* would be powerless to withstand it; and the men continued their work of bringing out stores and everything else that would be needed for a retreat. That night every one slept in his clothes. Early in the morning, Sverdrup, whose watch it was, awoke Nansen with the information that the hummock had almost reached the *Fram*, and was still bearing down upon her. A most unearthly noise accompanied every movement of the pack. That the ship's last hour had come seemed only too certain, and all hands went to work again to carry out De Long's plan of being a little readier to leave the ship than she was to leave them.

But the alarm proved to be groundless. Though matters did not improve, they got no worse until about 8 p.m., when a huge mass of ice and snow, which towered high above the rail, was borne rapidly towards the ship, and a perfect cataract of broken fragments thundered down on the tent roof which covered in the deck. One or two of the men seized spades and shovels; but any such attempt to stem the torrent was unavailing, and, dropping the useless tools, they betook themselves, under Nansen's directions, to fetching up their private belongings. The dogs were set free, and more alarmed than ever, as well they might be, they rushed, howling, from the ship.

The port side of the *Fram* was fairly buried beneath a superincumbent mass of ice and snow, and the roaring and groaning of the floes made speech useless. Hope was dead. True, the *Fram* was still unhurt, but how could she long withstand a pressure which crushed even the Polar floes themselves? But when the case seemed most hopeless, hope dawned afresh, for suddenly the pressure relaxed; and when the crew examined their ship they found that not a bolt had started, not a plank had cracked. This sample of the habits and manners of the ice, however, showed it to be so untrustworthy that, lest a repetition of the nip should occur, a large and judiciously-arranged depôt was established on the newly-formed hummock.

## CHAPTER XIV.

### A WONDERFUL WALK.

BY the last week of February all arrangements for the great sledge journey were completed, and Nansen and Johansen, with twenty-eight dogs, four sledges, and provisions for several months, started on their adventurous tramp. But carefully as the sledges had been constructed, they were not strong enough for the work, and a few hours after leaving the ship it became necessary to go back for repairs. Nansen thought that lighter loads would be more manageable; so, as he did not want to diminish his stock of provisions, he distributed them among six sledges, and on the twenty-eighth of February once more set out.

Again difficulties arose. The sun had not yet risen above the horizon, and the cold was intense; but worse still was the slow progress which seemed to be inevitable with the heavy loads, which the dogs tried in vain to draw. Several days' hard work produced such very slight results that Nansen, believing that travelling would be easier when the

sun returned, decided to defer the journey for a few weeks. Accordingly the two explorers returned to the ship; and as the experience of the last few days left no doubt as to the desirability of travelling in the lightest possible marching order, everything that could be spared was discarded. The time that would be saved by rapid travelling would compensate for the reduction of the stores, and Nansen therefore cut down the dog-food to about thirty days' supply. This was sadly inadequate, but he saw no means of carrying more; and though it would inevitably be necessary to kill some of the dogs, he hoped to reach land and procure game before the whole team had been sacrificed. For himself and Johansen he took a hundred days' rations, composed of a varied assortment of edibles, including, of course, a supply of pemmican. Everything was partially cooked; and an apparatus which would stew, and boil water, with a few gallons of petroleum for fuel, completed the culinary paraphernalia.

Clothing was confined within equally circumscribed limits. Each man wore a camel-hair coat and rough jersey, stout homespun knickerbockers and gaiters, with woollen under-garments and socks. Felt wide-awakes, "finnesko" or "komager" (Finn shoes), wolf-skin gloves, and an outer suit of snow-proof canvas completed their attire. For shelter they carried a light silk tent, and for bedding a fur sleeping-bag big enough to hold two men. The rest of the

equipment consisted of a couple of kayaks, several pairs of ski, guns and ammunition, a few scientific instruments, some drugs and surgical appliances, a spare shirt apiece, and a few tools and miscellaneous articles.

Thus provided, on the fourteenth of March they finally left the ship, and travelled due north over floes which, after the first few miles, were often level enough to allow of rapid progress. These level floes, however, were interspersed between awkward ridges and broken, hummocky ice, where the dogs could not manage the sledges. They soon became aware of this, and when they found themselves among rough ice, simply stood still or lay down until their masters came and hauled or lifted the sledges over the obstruction. The work was terribly hard, and as time went on both men and dogs became almost worn out. One of the latter soon collapsed under the strain, and became so hopelessly unfit for work that he was killed, and the carcass, duly skinned and cut up, was served to the other dogs for supper. It was a most unpleasant task to the explorers; and the matter was not mended when they found that many of the dogs, recognizing the nature of the meat, altogether refused to touch it. Later on, however, stern necessity reconciled them to this cannibal fare.

Day after day the same round of unceasing toil and hardship continued, and as time went on and the ice became rougher and more impassable, the diffi-

culties of the way increased. In the course of a few weeks the sun rose so high in the heavens that night no longer existed; and there being, in consequence, no reason for working or resting at specified hours, the travellers halted at any convenient time, and started again when it suited them to do so.

Nansen, who acted as cook, had always to be early astir, in order to prepare breakfast. As soon as it was ready he rejoined Johansen in the sleeping-bag, and, comfortably ensconced in its warm recesses, the two set to work on chocolate, biscuits, butter, pemmican, or porridge. The meal did not take long; and as soon as they had finished they turned out and began the labours of the day by making any needful repairs to harness, clothing, or provision bags, and doing any of the thousand and one odd jobs which the exigences of the journey rendered necessary. Then, having harnessed the dogs, they marched on steadily for several hours, when they halted for a rest and a little refreshment. But the mid-day halt was far from being an unmixed joy, for the cold usually robbed it of all comfort, and except by creeping into the sleeping-bag it was difficult to avoid the wind, which seemed to find its way to the travellers' very bones.

The chaotic wilderness of hummocks and ridges through which the explorers picked their way was not to be crossed anyhow. To attempt this would have been to court disaster; and Nansen, whose

long legs carried him conveniently over inequalities which a smaller man might have found difficult to cross, generally went on ahead to act as pioneer. Behind him came his own team of dogs, struggling gallantly with their load, though at the roughest places they often stuck fast, and Nansen was forced to come back to haul or lift the sledge over the obstacle, or give a helping hand to Johansen, who, with two teams and sledges, brought up the rear. As the dogs grew weaker these stoppages happened more and more frequently, until a large portion of the explorers' time was spent in going backwards and forwards, leading the way, giving this team a hand, urging that one forward, hauling one sledge, lifting another, shoving the third, shouting, encouraging, and when all else failed driving the dogs forward by blows most unwillingly struck. But it was a choice of evils: they must push on or fail in their task—perhaps perish miserably into the bargain; so the plucky fellows and their much-enduring dogs went on their way, though they grew so weary that not unfrequently the men fell asleep while walking. The cold was intense—70° of frost was not an uncommon record; and, to add to the miseries of the travellers, their clothes froze as hard as steel, and only relaxed when the warmth of the sleeping-bag temporarily reduced them to a condition of limp dampness, thus substituting one form of discomfort for another. A particularly unpleasant effect of these frozen garments was

that Nansen's sleeves, by constantly rubbing against his wrists, caused sores which, as he could not protect them from the cold, did not heal until summer was far advanced.

When the day's march ended, while Johansen fed and tended the dogs, Nansen pitched the tent, built a snow wall round it to keep out the wind, and cooked the supper, which was as varied as the stores permitted, though the only beverage was hot water flavoured with whey-powder. While cooking was in progress the worn-out, half-frozen men crept into their bag, where they lay shivering and shaking and crouching close together in an attempt to get warm, which generally proved futile until hot food and drink had revived them. With returning warmth sleep frequently overcame them, and, hungry and thirsty as they might be, they would fall asleep with their food half-way to their mouths. But the time for slumber was all too short. In a few hours the same weary round had to be begun over again, though the travellers had this satisfaction from their work that each camp was a little nearer to the Pole than its predecessor.

After more than a fortnight's labour, Nansen found that they had reached 85° 59′ north latitude. This, though far in excess of anything accomplished by previous expeditions, was not altogether satisfactory. Early in March the *Fram* had crossed the eighty-fourth parallel, and her drift before they left her,

added to their own progress since, which, in spite of difficulties, averaged several miles daily, should have taken the explorers far beyond the point attained. That this was not the case was due, as Nansen believed, to the fact that the ice was constantly drifting southward at a rate somewhat less than that at which they were travelling. On the eighth of April they had reached 86° 13′ 6″ north latitude, and, finding that the pack ahead presented one interminable, chaotic mass of ridges, snow-drifts, rubble, and obstacles of all kinds, Nansen decided to make this his highest point. It was disappointing thus to fall short of the complete success for which he had hoped, but for practical purposes the Polar mystery was solved, and to go on would be therefore useless suffering. If there should be any time to spare, it might be profitably spent in exploring Franz Josef Land, and thither the two friends determined to bend their steps. Before returning, however, they held a little feast in honour of the most northerly point ever gained by man; and then, as time was valuable, after a few hours' rest they began their southward journey.

The course lay to the south-west, and after the first day the travelling became so good that rapid progress was made. The road, instead of leading across the cracks and ridges, now ran parallel with them; and in order to take the fullest advantage of these propitious circumstances, some very long marches

were made. One, of unusual length, led to a rather disastrous result. It was the travellers' custom to wind up their watches at the end of the day's work, but on this occasion, when at last they halted, both timepieces had stopped. As no other chronometers were carried, the inconvenience was a serious one, for though Nansen the next day timed the watches as well as he was able, he could not ensure absolute accuracy, and there was in consequence an element of uncertainty in all their subsequent observations for longitude.

By the nineteenth of April the dogs' food was almost consumed, and the necessity of butchering their faithful companions deeply grieved the tender-hearted Norsemen. They dared not expend any of their small stock of ammunition, and they were, in consequence, forced to use their knives—a method of slaughter which, to both men, seemed horribly cold-blooded, though Johansen, on whom the task usually devolved, became a most expert executioner. By the middle of May only twelve dogs remained, and as three sledges were more than they could manage, the loads were rearranged, and one sledge was cut up for firewood, while an empty petroleum tin served for a cooking pot. The success of the device was not remarkable, for, before the travellers succeeded in boiling a tinful of water, they nearly set the tent on fire, half blinded themselves with smoke, and melted a hole right through the floe.

About that time the ice was drifting so rapidly that, fearing it would carry them past the land, the explorers made a slight alteration in their course. Travelling now became more difficult than before, and as the underfed dogs grew more exhausted, at the slightest obstacle they sat down and waited to be helped. Not only were these delays of frequent occurrence, but since the course had been changed water-lanes and pools, some of them of large extent, often sent the travellers far out of their way. Had the kayaks been fit for use, much trouble might have been saved; but the ill-usage which they had suffered on the journey had cut numberless holes in the canvas, and, until there was some prospect of reaching fairly open water, Nansen did not care to spend time in repairing them.

Snow, too, gave a great deal of trouble. Sometimes it lay deceitfully on the top of the water-pools with no ice beneath it, as though its object was to entrap unwary travellers, and more than once Nansen and his companion narrowly avoided taking an unpleasantly cold impromptu bath.

Summer was now manifestly approaching, and signs of life began to appear. First, some whales were seen sporting awkwardly in a big pool; but the travellers were unable to secure one, and, valuable as the meat would have been, they could not spare time to wait for another chance. Then some birds showed themselves, and on the last day of May the recently-

made tracks of three bears—an old one and two cubs —were seen.

At last the perpetual travelling round cracks and pools became unbearable, and when they could no longer endure it the travellers camped and set to work to repair the damaged kayaks. This was in itself a long job, and it was made longer by the scarcity of materials, which made it necessary carefully to unwind every lashing. Even some of the bamboo ribs were split, and as these too needed very careful repairing, the work progressed but slowly, though the boat-builders often laboured for twenty-four hours at a stretch, and seldom had more than two meals during that time.

Such praiseworthy industry in a few days completed the work, but when it was finished and the camp was broken up, the water-lanes with one accord closed up; so the carefully-mended kayaks, for the time being, were not required. But the lanes soon re-opened and gave more trouble than ever, for they were often filled with a slushy compound of broken ice and half-melted snow too thick for the kayaks, but only sometimes strong enough to bear the weight of a man. Moreover, pleasant as was the returning warmth, its effect on the snow was disastrous, and in a few days the ice was covered with a sloppy, ice-cold sludge through which the dogs half swam and half waded. It was terrible work for them, and in two cases led to attacks of a sort of paralysis, which

deprived the sufferers of the use of their legs. Ill as they could be spared, there was no choice but to kill them, and by the middle of June only three dogs were left alive.

Fortunately about this time two seals were shot, and as these afforded a plentiful supply of food, the need for immediate hurry was over. Under the circumstances, to push on might indeed be a case in which increased haste resulted in loss of speed, so the explorers camped and waited quietly until rain came and cleared the ice of its sludgy covering. The delay was not without advantage, for, in spite of the labour bestowed on the kayaks, they were still inconveniently leaky, and their owners now improved the time by calking them and painting them with a mixture of soot and train-oil.

One evening Nansen's dog, Kaifas, barked so loudly and continuously outside the tent that, after listening to the noise for some time, his master looked out to discover the cause of the disturbance. It was well he did so, for he was just in time to see a big bear march up to Kaifas and begin sniffing at him. The salute was probably not friendly in intention, and as, moreover, a bear would be an agreeable addition to the larder, Nansen fired, breaking the intruder's shoulder. Off went the bear on three legs, with Nansen and Johansen in pursuit; but they had not gone far when two cubs, who had clearly been waiting for their mother, joined her and

ran round her in evident anxiety. Thanks to her injury, Nansen could just keep pace, and at last managed to put a bullet into her side. This time she fell, and the two cubs hastened to her, and, while Nansen reloaded his rifle, did all they could to induce her to rise; but their efforts were unavailing, and a third bullet laid one of them beside her. The other, now utterly disheartened, stood sadly beside his dying mother and brother; and, more in pity than to obtain a further supply of meat, Nansen shot him through the heart, and he fell beside the others.

At length the kayaks were made as water-tight as circumstances would permit; and then, as a downpour of rain had cleared the ice, another start was made. In order that the sledges might run easily, everything that could possibly be spared was abandoned, and on the twenty-second of July the travellers again set out.

Once or twice, while in camp, Nansen had seen a white line in the distance which sometimes looked like snow-clad land and sometimes like a cloud-bank. At first he took little notice of this, but after travelling for two days in the direction of the mysterious appearance, he felt certain that it represented land. But what land could it be? This was a question which neither he nor Johansen could answer; but whatever it might be it was still distant, and for thirteen days they plodded on across ice which was little short of impassable. Broad lanes intersected the path in all directions, and many of these, instead of containing

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water, were filled with a slushy compound of broken ice and half-melted snow. The kayaks were in frequent use; and as, for convenience in carrying the sledges, they were always lashed together before being launched, when lanes were plentiful a good deal of time was spent in fastening and unfastening the lashings.

One day, while preparing to cross a water space, Nansen, who was busy with his kayak at the edge of the ice, heard an unwonted sound behind him, and turning quickly he saw Johansen on his back in the snow grasping a big bear by the throat. The situation was critical. Johansen was strong, but the bear was stronger, and Nansen hurriedly reached out his hand for his gun, which lay on the front of the kayak; but as he did so, the heavily-laden boat slid down into the water. To haul it up was no easy matter, and before it was accomplished Johansen, finding the bear too much for him to manage unaided, called to his friend to hurry up.

Another tug placed the kayak in safety, and having seized his gun Nansen went to the rescue. Bruin by this time had found Johansen's grip rather too close to be agreeable, and as Kaifas just then came on the scene, the bear turned his attention to the dog, to whom he administered a hearty box on the ear. Doubtless he would have proceeded to further hostilities, but at this point Nansen stepped in and planted a charge of shot behind the bear's ear, thus

completely turning the tables on the aggressor, who fell dead on the spot. He was in fact the only sufferer. Kaifas seemed in no way damaged by the cuff on the head, and Johansen, who had been the recipient of a similar attention, had escaped with a scratch on one hand and a white patch on his cheek, where the bear's paw had wiped off the grime resulting from a long course of petroleum smoke combined with defective ablutions.

At length the last water-lane and the last stretch of wet, sloppy ice were crossed, and the two explorers stood at the edge of the huge Polar ice-field which had for so long been the scene of their labours. One portion of their great journey was accomplished, and before them lay a belt of open sea and the long-desired land, in the shape of a group of ice-capped islands.

Preparations for continuing the journey by water were at once taken in hand: the kayaks were lashed together and judiciously loaded; but it was not possible, with those frail and already overladen boats, to take the two dogs. It was hard to part with them after their long and faithful companionship, and harder still to have to be their executioners; but it was inevitable, and each man shot his comrade's dog. Then a sail was rigged up, and soon the kayaks were dancing merrily over the blue water towards the unknown land, to which, on account of its resemblance to a scene in a Norwegian fairy-tale, Nansen gave the name of Hirttenland.

## CHAPTER XV.

### A COMFORTLESS WINTER.

AFTER a short run before the wind, the kayaks reached the islands and ran under the lee of an immense glacier, which rose sheer out of the water to a height of fifty or sixty feet. No landing-place was to be seen, and, lowering the now useless sail, the explorers paddled along until, as evening drew on, for lack of a better camping-place, they hauled the kayaks on to a convenient floe. In the morning they again embarked; and thus, sometimes sailing or paddling in open water, and sometimes hauling the kayaks over large expanses of level ice, several days passed uneventfully, though bear tracks innumerable crossed each other in all directions.

About this time Nansen made an interesting ornithological discovery. Hitherto the beautiful bird known as Ross's Gull had been among the many mysteries of the Arctic Regions, and whence it came or whither it went no one could tell. Nansen, however, found it at home, for while near the islands he daily saw numbers of these birds flying about at their ease, and

though August is the wrong time of year for birds nesting, it was evident that at last their breeding-place had been found.

The explorers had expected to strike land somewhere on the eastern shores of Franz Josef Land, but as they went on none of the characteristic features of the coast, as set forth in the map, were to be seen. Nansen, therefore, was forced to the conclusion that his reckoning must be greatly at fault, and that they were in reality somewhere on the unknown west coast of the Franz Josef Land Archipelago. The error had probably been made when the watches ran down; but, however that might be, Nansen was certain that Spitzbergen lay to the south-west, and in that direction he accordingly steered, hoping to fall in with a Norwegian walrus sloop.

One evening the wanderers reached a spot where ice and snow gave place to real land with moss and flowers. Nearly two years had passed since they had seen anything of the sort; so, to do honour to such a memorable event, the Norwegian flag was unfurled, and the explorers supped with their national banner waving over their heads. But even at this enticing spot they could not linger, and though contrary winds and a superabundance of drift-ice caused a good deal of delay, whenever it was possible to advance the travellers pushed on, hauling, paddling, or sailing, as circumstances suggested. The stores which they had brought from the *Fram* were by

this time at an inconveniently low ebb, so a bear which, during one of the compulsory halts, fell a victim to Nansen's rifle, was a welcome addition to the supplies.

This sort of life continued until the last week in August; and then, as both wind and ice combined to forbid further progress, the travellers camped on a dreary-looking shore which, though to their eyes anything but inviting, was evidently not tenantless, for scarcely were the kayaks safely landed when a bear was shot by Johansen. During the night the wind drifted the ice inshore in a manner which effectually extinguished all hope of speedy escape; so the explorers, having collected a stock of big stones, set to work to build a shelter. Unfortunately they left Nansen's unusual height out of their calculations, and when the edifice was completed he could only lie down by sticking his feet outside the door. Such an arrangement could only be regarded as a strictly temporary one; but, as the wanderers hoped to go on again immediately, such a minor discomfort did not trouble them. Day after day, however, passed, and still the ice appeared to have no intention of releasing them; and at last, as the season was far advanced and the locality seemed to be well stocked with game, they decided to spend the winter where they were.

Having arranged this, there was no time to lose if the period of darkness was to be spent in anything like comfort. A better hut was a necessity, but this

could wait a while, and before they did anything else the two friends set to work to lay in a stock of meat and blubber. In this endeavour they were eminently successful, and in the course of a few weeks they secured so many bears and walruses that, so far as the commissariat was concerned, all ground of anxiety was effectually removed. They were not the only gainers, for the gulls of the neighbourhood, being absolutely fearless, took full advantage of the unwonted plenty, and while the meat was being cut up they flocked round the carcasses and carried off choice morsels from under the very eyes of the amateur butchers.

Skinning the walruses was far from being an unmixed joy. The carcasses were far too heavy for two men to handle, and when the creatures were shot in the water it was so difficult to haul them on to the ice that, after one or two attempts, the hunters took to skinning them as they floated. This could only be accomplished by lying down on the carcasses, and before the work was finished the clothes of both men were completely saturated with oil, blood, and dirt.

One day a couple of walruses were killed on the ice at some distance from land. The operation of skinning them was a long one, and the men became so engrossed that they took little notice of the rising wind, nor did they discover that the floe on which they stood had detached itself from the shore-ice, and was floating gaily out to sea. At last Nansen hap-

pened to look up. Surely when he last saw land it was not so far distant. Then he noticed that the floe was rapidly going adrift, and without loss of time he called Johansen's attention to the fact. Fortunately they had brought the kayaks with them; but though a very few minutes sufficed to load them with part of a hide, some meat, and blubber, getting back to land was a long business, for the wind had broken up the ice, and huge blocks were swirling about promiscuously, and dashing up against one another with almost irresistible force. To steer safely through the hurly-burly was no easy matter, and more than once the kayaks nearly came to grief before they reached the shore.

Having obtained a sufficient stock of meat, the explorers set to work to construct habitable winter-quarters. More stones were quarried, and with the view of securing greater warmth the walls, which were banked round with snow, were only raised about three feet above the ground. The needful space was secured by hollowing out the earth inside; and when the roof of driftwood and walrus-hide was adjusted, even Nansen could stand upright beneath it. One side of this semi-subterranean dwelling was occupied by a sleeping-shelf which ran, Eskimo fashion, along the wall, and was constructed of selected stones, well covered with bearskins. But notwithstanding all the care devoted to its arrangement, that sleeping-shelf never became an ideal resting-place, for all the

bearskins available were insufficient to counteract the angularity of the stones beneath them.

Light and warmth were obtained from lamps, made by bending up some sheets of German silver into a convenient form, and these, when filled with crushed blubber and supplied with floating wicks, the product of disintegrated bandages from the medicine-chest, were very fairly effective. They were, however, unsuitable for cooking purposes, so at one end of the hut a small fireplace was constructed. Above this a hole was cut in the walrus-hide roof to emit the smoke; but the result left much to be desired, and the hole was supplemented by a chimney of ice, which required renewing several times during the winter.

On the fifteenth of October the sun disappeared below the southern horizon, but for some days longer there was sufficient light to allow of outdoor work. The last bear of the season was shot on the twenty-first of October, and thenceforth the only visitors were foxes, which throughout the winter used to come and sit on the roof and gnaw away for hours at the pieces of frozen meat to which they were always made welcome. This liberality extended, they seemed to think, to everything, and they helped themselves to whatever took their fancy and chanced to be of a portable nature. String, wire, bamboos, stones, harpoons, and a variety of other articles were taken without consulting the original owners; but

the crowning theft was committed when the thermometer was carried off to decorate some hyperborean "earth."

As darkness set in, life sank to a dead level of intense, dreary monotony. There was literally nothing to do except to eat and sleep, for the wanderers were entirely without literature, and outdoor exercise during the severest cold was such a penance that days passed without either of them putting his head outside the door, unless indeed a supply of meat or ice was required. Nansen had intended to get through a great amount of literary work, but he gave up the idea in disgust when he found that every paper touched by hands or clothes received a brown, greasy imprint, and that pencil notes written one day were undecipherable the next, mainly on account of the said omnipresent grease.

Try how they might, the unlucky men could not clean either themselves or their clothes. The latter they boiled and scraped, with the result that enough grease was extracted to replenish the lamp; but the fabric was so thoroughly impregnated with oil that the garments seemed little the better. Nansen's knickerbockers stuck to his legs so persistently that at every movement they tore the skin, and formed sores which frequent bathing relieved, but did not heal. A few pounds of soap would have been an untold comfort, but as it would have been practically useless while on the march, and the winter camp was an

entirely unexpected addition to the programme, this article had not been included in the stores. Moss and sand, train-oil and bear's blood were tried as substitutes, but they were not universally applicable; and long before the winter ended, a good wash and a complete outfit of new, clean clothes assumed a prospective attractiveness altogether unusual. But soap and clean clothes were hopelessly unattainable, and the explorers became blacker, and their hair and beards grew longer and wilder, until they bore not the slightest resemblance to the fair-haired, fair-complexioned men who a few months before had left the *Fram*.

During the long weeks of darkness the two friends practically converted themselves into hybernating animals, and often for days together they hardly woke up except to eat or cook. Their only provisions were bear and walrus meat, boiled, fried, or made into soup, and varied occasionally by a piece of burnt blubber from the lamp; but fortunately they never tired of their very limited dietary, neither did their health in any way suffer.

At last the winter wore away, and in February signs of returning spring gladdened the eyes of the wanderers. First came a flock of little auks, then more and more birds winged their way northward, and on the eighth of March, after a long and exciting chase, a bear was shot. The sun had now returned, and as he rose higher in the heavens Nansen and his comrade began to make arrangements for

continuing their homeward journey. First and foremost came the matter of clothes. Those which they were wearing were entirely unfit for further use, so a couple of blankets were cut up and converted into suits, which, if they had no other merit, were at any rate warm and fairly clean. A new sleeping-bag was also made from the bearskins, and sewn with thread obtained by unravelling canvas, while the shoes were patched and repaired with walrus-hide. All this took time, but there was no special hurry, so the work was carried on deliberately and effectually.

The next business was to examine the cache where the little that remained of the preserved provisions had been deposited in the autumn. The result was disappointing; for, owing, perhaps, to the many upsets they had suffered, the provisions had got damp, and only some fish flour, ordinary flour, and biscuits were fit for use. The deficiency, however, was made up with bear-meat, and the empty petroleum tins were filled with train-oil to feed the lamp, which now had to do duty as kitchen apparatus.

To replace the tent was a more difficult matter. The rough treatment which it had suffered on the last journey had been too much for it, and it now defied repair. A good sleeping-bag, however, would go far to supply what was needed, and with such additional shelter as they could improvize with the aid of the kayaks, sails, and sledges, the hardy Norwegians did not fear to face such cold as was now to be expected.

At last all was ready, and on the nineteenth of May a start was made. At first the sledges had to be hauled; but after a time, much to the joy of the travellers, they came to open water, on which they hoped to sail pleasantly southward. But no such luck awaited them. A storm came on, and kept them stationary for some days, at the end of which they found that a close pack extended on all sides, especially in the direction in which they wished to travel. The ice, however, was in good condition; and when the sails had been hoisted, the sledges glided swiftly over the smooth surface, and really good progress was made. The sledge work continued until the twelfth of June; and then the explorers once more lashed the kayaks together, transferred the sledges to the deck of the double boat, and stepping into their seats, steered for Spitzbergen, sailing or paddling as was most convenient.

One evening, while thus coasting peacefully along, it occurred to the explorers that it might be advantageous to go ashore, in order to get a more distant view than could be obtained from the kayaks. Accordingly they drew up to the ice; and having, as they thought, securely moored the boats with a strap, the friends strolled leisurely to a convenient hummock. Having climbed to the top, they gazed around for a few minutes; and then, chancing to look towards the kayaks, they saw to their horror that the boats were adrift. To rush down to the water's edge was the

work of a very few moments, and as he ran Nansen threw off some of his clothing. It was a matter of life or death — everything they possessed was on board those wretched kayaks; and, leaving Johansen on the ice, Nansen plunged into the sea.

The water was icy cold; and, strong swimmer as he was, long before he reached the drifting boats his limbs were almost benumbed. Could he ever catch them? Tired out, he turned on his back to rest, and, looking ahead, saw that he was certainly gaining on them. Greatly encouraged, he struggled on manfully, until he was able to grasp a ski which was lashed across the stern. Now it only remained to scramble on board, but when he tried to pull himself up, his numbed arms were quite unequal to the exertion. But he had not done so much only to fail ignominiously at last; and, making a great effort, he contrived to throw his leg up to the sledge, and thus to climb out of the water.

Now the worst was over. It was no easy task for one shivering, half-frozen man to paddle the double canoe; but he persevered, and at last reached the floe, from which Johansen, in breathless anxiety, had been watching his progress. Without his help Nansen could hardly have landed, and he was fain to let his friend help him off with his wet clothes. Then, having put on such dry garments as he possessed, he crawled into the bag, and after a sound sleep was quite ready to take his share of the hot

supper which Johansen had prepared while his friend rested.

Misfortunes, it is said, never come singly; and, two days later, Nansen's kayak was assailed by a walrus. It was not by any means the first time such an event had occurred, but on this occasion the attack was peculiarly vicious. The walrus came up close to the boat, and then, laying his flipper on the edge, and driving his tusks through the bottom, he endeavoured to capsize the object of his dislike, which he apparently regarded as some unknown kind of sea-monster. Fortunately the tusks just missed Nansen, who, raising his paddle, dealt his assailant a stunning blow on the head. The walrus, surprised at this reception, rose high in the water, as if he contemplated once and for all smashing up the daring intruder; but, thinking better of it, he went down quietly, and allowed Nansen to run his rapidly-filling kayak on to a convenient floe.

The next day was spent in repairing damages, and drying the half-soaked contents of the maltreated kayak. A few hours sufficed for this; and after a good night's rest Nansen began to get ready a rather late breakfast, preparatory to making another start. Having set his cooker to work, he ascended a neighbouring hummock to look round, when a sound long unheard struck on his ear. Certainly he *might* be mistaken, for thousands of looms and other sea-birds were calling to each other, and raising a perfect babel

of noise; but—yes, there it was again—did ever bird utter such a clear, joyous "bow-wow-wow"? To mistake that sound for any other was impossible—no living being but a dog could bark like that; and if a dog was there, surely his master could not be far distant.

Half-wild with joy, Nansen rushed down from his vantage-ground to waken Johansen; but he, not having heard for himself, was more sceptical. Nansen declared that his comrade was at liberty to believe just what he pleased, but he himself was going to find that dog and his presumed master. Breakfast, therefore, was hurriedly swallowed; and no sooner was the meal finished than Nansen mounted his ski, and, taking his gun, dashed off towards the shore, leaving Johansen to mind the camp. So far as the dog was concerned, silence had reigned for a time; but as the active skilöber travelled rapidly over the ice in the direction whence the sound had come, he clearly heard more barking and then a loud shout. Looking up, he saw a man approaching him, and soon Nansen and the new-comer, whom he recognized as the English explorer Mr. F. G. Jackson, were heartily greeting each other and warmly shaking hands.

Nansen soon saw that, though he knew Jackson, the Englishman did not remember him. Indeed, it would have been strange had he done so immediately, for the fair-skinned, fair-haired Scandinavian whom Jackson had met in London some years before had

little in common with the grimy, unkempt, greasy individual who now stood before him. But after several questions and answers had followed one another in quick succession, recollection began to dawn, and Jackson asked,—

"Aren't you Nansen?"

"Yes," tranquilly replied the owner of that name, "I am Nansen."

"By Jove," responded Jackson cordially, "I really am awfully glad to see you," and the two shook hands again more heartily than before.

Before Nansen left Europe an English expedition, under the auspices of Mr. A. C. Harmsworth, was being fitted out to explore Franz Josef Land; so the sight of the leader of the party was no great surprise to the Norwegian. Nor was Jackson greatly astonished to meet some one from the *Fram*, for whose crew he had brought a goodly bundle of letters; but how was it that Nansen was alone? Where were his ship and his companions? Could the expedition have come to utter grief? Unable to solve the mystery himself, Jackson asked what had happened, and why and where Nansen had left the *Fram*. Nansen, in reply, gave a brief description of the voyage, and of his own and Johansen's adventures on the ice, finishing with the information that his comrade was in camp at no great distance from the spot where they stood. Further explanations were reserved for a more convenient opportunity; and the two men,

still talking eagerly, turned their steps towards Elmwood, Jackson's head-quarters.

Long before they reached the house, the other Englishmen came out to meet them, and as soon as his friends were within hail, Jackson shouted, "This is Dr. Nansen." Hurrying forward, they eagerly shook hands with the new arrival, for whom they gave three hearty cheers; and then two of them went on to Nansen's camp, while the rest of the party returned to Elmwood.

Meanwhile Johansen was patiently waiting for his friend to come back; but hour after hour passed, and still no sign of him was to be seen. At last he saw a figure approaching. It was certainly not Nansen, but it was a man of some sort, and Johansen looked round for something that would serve as a signal. The first thing that came to hand was a much-begrimed shirt, and, catching up this apology for a flag, he hoisted it on a ski-staff. In many respects it left much to be desired, but it answered the purpose, and in a few minutes he was vigorously shaking hands with his visitors. An unexpected difficulty now arose, for Johansen did not understand English, and Jackson's comrades were unacquainted with Norwegian; but they managed somehow. When Johansen had been accommodated with a pipe and tobacco, the Englishmen took charge of the kayaks and other property, and they all set off together.

It was midnight before they reached Elmwood, but

on such a festive occasion time was of no account; and, after a short interval, which the two Norwegians occupied in resuming the garb of civilization, the party sat down to a sumptuous repast, specially prepared in honour of the occasion. Never did men receive a warmer welcome; and their presence was so obviously pleasant to the Englishmen that, when Jackson invited the two explorers to stay at Elmwood until the arrival of his ship, the offer was cordially accepted. The Norwegians were soon quite at home, and time passed pleasantly in such congenial occupations as exploring the neighbourhood, reading, map-making, and shooting; while Johansen took advantage of the opportunity to increase his knowledge of the English language. On both sides there was much to hear; and the story of the English expedition was little, if any, less interesting than that which Nansen had to tell.

## CHAPTER XVI.

### JACKSON-HARMSWORTH EXPEDITION.

SEVERAL months before the *Fram* sailed from Christiania, Mr. Jackson had written to one or two English newspapers propounding a scheme for Arctic exploration by way of Franz Josef Land. He was ready and willing to go, but the expedition would cost money, and at that time nobody seemed disposed to provide the necessary funds. Jackson, however, hoped that money would sooner or later be forthcoming, so, to prepare himself for the work, in the summer of 1893 he betook himself to Siberia, and spent several months in exploring Waigatz Island, and the tundra between the rivers Ob and Petchora. He picked up a great deal of useful information, and during his absence the money difficulty was solved, for a friend mentioned him and his scheme to a wealthy Arctic enthusiast, Mr. Alfred C. Harmsworth of Elmwood, in the county of Kent. The plan met with Mr. Harmsworth's entire approval. He rejoiced that an English explorer should again come to the front; and, in a thoroughly British spirit of enterprise, he undertook to finance the proposed expedition.

These important preliminaries being arranged, preparations for the expedition were at once begun. The first thing necessary was a ship; and Mr. Harmsworth succeeded in obtaining the *Windward*, a vessel of high reputation among the whalers of Peterhead. She was an immensely strong vessel, and, though not remarkable for beauty, was in all respects well fitted for her work, which was to take the explorers and their stores to Franz Josef Land, visit them yearly during their stay in the far north, and finally to bring them home.

There was no need for her to remain permanently with the expedition, and Jackson was of opinion that a small number of specially-selected men were likely to succeed better than a large party.

Next in importance to the ship came the boats, most of which were constructed with special reference to the work for which they might be required. Consequently they were not all of one type, and they included, beside the whale-boats carried by most Arctic ships, a copper boat, an aluminium boat, a birch-bark canoe, and several Norwegian boats of pine with oak bolts. For land travelling or work on ice, sledges were provided, to be drawn either by Siberian sledge-dogs, which were to be embarked at Khabarova, or by Russian ponies. Twenty-four pairs of ski were also obtained from Norway.

During Jackson's Siberian trip, he had come to the conclusion that the Samoyed dress was the ideal Arctic garb, or, at any rate, that it came as near to

the ideal as human inventions usually do. He therefore adopted it as the winter attire of his party, and each man was provided with a *militza*, or reindeer-hide tunic, made, like Bryan O'Lynn's celebrated coat, with

"The shiny side out and the shaggy side in."

The sleeves were finished off with mitts of the same material, but a slit at the wrist allowed the hand to be slipped out of its covering at the pleasure of the wearer. Under the tunic, which was kept in place by a belt, was worn a *siluke* of similar cut to the militza, but of white reindeer skin, hair outwards. For foot-gear the explorers did not confine themselves to any one variety or nationality of shoe, and they wore Samoyed *pimmies* or long boots, elkskin boots, Lapp *finnesko*, snow boots, etc., as individual taste suggested. The head-dress generally favoured was a close-fitting cap of natural undyed wool.

As it was Jackson's intention to remain for some years in Franz Josef Land, a permanent residence was necessary. To meet this want, plenty of building material—wood, felt, and air-tight canvas—was taken, as well as a Russian log-house. For use on sledge journeys the explorers were provided with light, double-walled tents, so constructed that they required neither poles nor ropes.

The scientific aspect of the expedition was not forgotten, and a large assortment of instruments was provided. Some, for the sake of lightness, were

specially made of aluminium; and a complete set of meteorological instruments was lent by the Meteorological Office. The Kew Observatory was equally accommodating with regard to a magnetic outfit. Not less important, from a different point of view, was the very complete armoury of guns, revolvers, harpoons, and ammunition, with which the expedition was provided.

Last, but not least in importance, came the commissariat department; and in this, as in other details of the equipment, all modern improvements were adopted. Salt provisions, the bane of so many earlier Arctic expeditions, scarcely figured in the list, and their place was supplied by tinned and otherwise preserved meat and vegetables. In addition to these, Jackson provided himself with potatoes, biscuits, flour, oatmeal, and sugar by the ton, and with proportionate quantities of chocolate, cocoa, lime-juice, honey, jam, pickles, and other miscellaneous stores, including a supply of good port wine, in which, as a deterrent of scurvy, he was a firm believer. For the dogs and ponies equally liberal provision was made, and tons of cod-liver oil biscuit, compressed hay, and mixed provender were laid in for their use.

The proposed expedition having got wind, its promoters were inundated with applications for posts, and by the time other preparations were completed, seven fortunate individuals had been chosen to accompany Mr. Jackson. The party included Lieutenant

A. Armitage of the Royal Naval Reserve and Peninsular and Oriental Service, second in command and astronomer; Mr. R. Koettlitz, M.R.C.S., L.R.C.P., surgeon and geologist; Mr. H. Fisher, curator of the University College Museum, Nottingham, botanist; Mr. F. J. Child, a host in himself, as, in addition to his proper duties as mineralogist and photographer, he was a competent chemist, carpenter, and engineer; Mr. H. A. Dunsford, a practised traveller and surveyor; Mr. S. Burgess, who had a good deal of Arctic experience, and, though specifically a surveyor, was equally at home as cook and general-utility man; and finally, Mr. J. Hayward, who held no particular post, but made himself useful wherever his services might be required.

On the twelfth of July 1894, the *Windward* sailed from Greenhithe, and on the last day of the same month arrived safely at Archangel, where she took on board four hardy little Russian ponies, some log-houses in sections, ready to be put together, and a large assortment of Samoyed fur clothing. This finished her business as far as Europe was concerned, and, leaving Archangel, she steered direct for Khabarova, where she picked up thirty fine dogs. This occupied little time, and on the sixteenth of August she again pursued her way northward, but in a few hours she found herself among drift-ice. To make matters worse, the usual Kara Sea fog enveloped her, and for several days caused a good deal of hindrance

and annoyance. Once, when it was thicker than usual, she narrowly escaped running on to the ice; but no damage was done, and making her way out of the pack, she continued to steam north-westward. A day or two later, she again came in contact with heavy ice, which completely blocked the way; but at last a convenient lead was discovered, and through this the *Windward* steamed triumphantly into open water beyond the pack.

Franz Josef Land was sighted shortly afterwards. It was only about thirty miles distant, but again ice caused an obstruction, and for nearly a fortnight the ship dodged backwards and forwards before she succeeded in reaching Bell Island, one of the most southerly of the Franz Josef group. But it was one thing to reach land and another to find a suitable anchorage, especially as some desirable places were blocked up with ice, and a strong current was rushing through Miers Channel, on the east of Bell Island. Up this channel, however, the *Windward* steamed; but failing to find a convenient landing-place, she proceeded to Cape Flora, the western point of Northbrook Island. Here Mr. Leigh Smith had wintered in 1881, and the remains of his quarters were still visible in the shape of a roofless hut which otherwise was in fairly good repair, considering that, since it was deserted, it had weathered thirteen Arctic winters. This spot promised well enough, and finding that he could not improve upon Leigh Smith's choice, Jackson

OPEN SEA 1896
Albert Edward I.
Alfred Harmsworth I.
Harold Harmsworth Straits
Mary Elizabeth I.
Salisbury I.
CECIL RHODES FJORD
Arthur I.
Leigh Smith Sound
Albert Armitage I.
CHAMBERLIN FJORD
H.M.S. Worcester Glacier
Payer Glacier
PRINCE GEORGE LAND
Clements Markham Bay
BRITISH CHANNEL
MARKHAM SOUND
Robert Peel Sound
Regnald Rutlitz I.
HOOKER I.
Mc CLINTOCK ISLAND
Peary Glacier
CAMBRIDGE BAY
ALEXANDRA LAND
VICTORIA SOUND
BRUCE I.
NORTHBROOK I.
Mabel I.
Dell I.
May I.
Edwards I.
Newton I.
Scott Keltie I.
Eaton I.
Bradley I.
Abercare Channel
Sonomy Glacier
Nansen's Hut
Smith Bay
Wm. Neale I.
C. Hugh Mill
C. Norway
C. Brun
C. Alice Armitage
C. Fisher
C. Sybil Kendlore
C. Tiarmon
C. Polar Glacier
Pt. Arthur
C. Paterson
C. Palmer
C. Bergen
C. Copeland
C. Oppelen
C. Burenin
C. Norod
C. Johansen
C. Fridtjof Nansen
C. Geo. Thomas
C. William Bruce
C. Battenberg
C. Grosvenor
C. John Murray
C. Mary Harmsworth
Northwestfold Bay
Wegrecht Bay
Cape Grey
Cape Norie
Elmwood
Gertrude
Grey Bay
Eastern Bay
Old depot
Cape Fanny
Cape Ida
Glacierated land 700 ft.
High glacierated land
High land
Low land
Glacierated slope 800 ft.
Lower glacierated slope
Lower Bay
Bruce Sound
Mabel Sound
Dell Sound
Bruce Channel
Cambridge Bay
Victoria Sound
Markham Sound
Bradley Sound
Abercare Channel
Sonomy Glacier
Cecil Rhodes Fjord
Salisbury I.
Tadesco Fjord
Cape Ida
Cape Fanny
Cape Norie
Elmwood
Gertrude
Cape Grey
Grey Bay
Eastern Bay
Northwestfold Bay
Wegrecht Bay
Cape Ida
Cape Fanny
Old depot

set all hands to work to unload and land the cargo. It was already late in the season, and there was no time to spare, so the men worked long shifts—sixteen hours on and eight hours off. A few more days would have seen the work completed and the *Windward* ready for sea; but, as bad-luck would have it, before everything was landed a sudden storm set in, and on the thirteenth of September so much new ice had formed that the boats could no longer ply between the ship and the land. This stopped the work, and as by the time the ice had strengthened sufficiently to bear loaded sledges the ship would be too firmly frozen in to have any chance of escape, Jackson decided to keep her where she was for the winter. She was therefore secured in a sheltered bay on the south of the cape, where she was safe from the assaults of the ice under any circumstances. After this there was less need for hurry, and, as soon as the ice would allow, the work of unloading the cargo proceeded steadily, but with more deliberation than at first. Building operations, too, were begun, for though the crew of the *Windward* continued to live on board, Jackson and his staff preferred to get into their own quarters, and an imposing-looking settlement, which was named Elmwood, sprang up with mushroom-like rapidity.

The settlement occupied a raised beach, off which the wind perseveringly cleared the snow whenever it made any attempt to accumulate. In such a breezy

situation a warm, wind-proof house was an absolute necessity; but nothing could have been better than the Russian house brought from Archangel, which, when comfortably fitted up and lined from floor to ceiling with green baize, was, as Jackson said, "as snug as the inside of a gun-case." It was not a very spacious residence, for beside a store-room and a kitchen, which opened from the entrance passage, the principal apartment was a comfortable, twenty-foot-square living-room, lighted—when there was any light to come in—by four double-framed windows. When artificial light was necessary, some first-rate lamps amply fulfilled all requirements, while a Russian stove kept the atmosphere at a comfortable temperature. Altogether the room looked very bright and cosy: the floor was carpeted and strewn with rugs; in the middle stood a substantial table; book-shelves and small tables occupied suitable corners; while, for the reception of miscellaneous articles, commodious racks were stretched across the room below the ceiling. By the time the stores were landed, the houses built, and all the other preparations completed, winter had fairly set in; but Jackson managed to find time for a sledge trip to Cape Barents, where he cached about six hundred pounds of meat.

In this most northern of British settlements the daily round of life was much the same as in more southern latitudes. At 8.30 a bell aroused the sleepers, and as the establishment boasted a bath-

room, each man had his own day for having a hot bath before breakfast, which was served at nine o'clock, and in no way differed from a well-ordered English meal, except that it usually included a dish of bear-meat. After breakfast everybody began work; one took upon himself the duties of housemaid, another fetched snow for the water-barrel, while the rest occupied themselves with lamp-cleaning, harness-making, map-drawing, scientific observations, or any of the various things which from time to time demanded attention. At twelve o'clock work was put aside, and exercise and recreation filled up the time until two o'clock. Then came lunch, and afterwards outdoor duties kept everybody employed until dinner-time. The evening was spent in reading, writing, or games; and about midnight the men unrolled their rugs and blankets, and lay down on the floor to sleep the sleep of the just. Jackson, however, occasionally varied the programme. He was not altogether satisfied with the sleeping-bags, and with the view of testing them and the rest of the sleeping-gear, he sometimes betook himself to the roof, and slept under the stars, serenely indifferent to 60° or 70° of frost.

During the winter sundry hunting adventures made pleasing breaks in the monotony of life. One morning early in February, Jackson, who had been out all night after bears, was about to lie down for a few hours' sleep, when he heard the dogs barking furiously, and at once he rushed off in an unusually light cos-

tume. Following the enticing sounds, he crossed the floe, and after walking about two miles, reached a large, open pool, on the edge of which a big bear was busily engaged with four dogs whose attentions seemed more pressing than agreeable. He was too fully occupied to take any notice of Jackson, whose first shot wounded him severely and caused him to take refuge in the water; but on second thoughts he came out again, and hurriedly departed in the direction of Miers Channel, hotly pursued by Jackson and the dogs. At the first chance Jackson fired again, but the mist and darkness made his aim uncertain, and the bear, who was evidently doubtful as to what was the best course, returned to his original position, and stood at bay about thirty yards from the pool.

Having now only one cartridge remaining, Jackson wished to get to close quarters; but as he was cautiously approaching, Bruin, suspecting mischief, put his head down and charged his pursuer, who instantly fired. Just at the wrong moment up went the bear's head, and the bullet, instead of crashing through his forehead, passed harmlessly between his legs. An empty rifle was now Jackson's only defence; but in his hands it was an effectual one; and as the bear, open-mouthed and roaring, rushed upon him, he drove the barrel with all his force down the creature's throat. Quickly withdrawing it, he prepared for another thrust; but the bear had had enough, and took to his heels. Without ammunition

it was useless to pursue him, and by the time Jackson had fetched more cartridges from Elmwood, Bruin, roaring dolefully, had betaken himself to the farther side of the water, where he was out of danger, though Jackson had little doubt that he was mortally injured.

On another occasion three cubs were caught. For some time they were inmates of the house, but in spite of all efforts to tame them they continued as wild as ever. Jackson intended to present them to the Zoological Gardens, and with this end sent them home when the *Windward* sailed; but unfortunately the voyage was too much for them, and they died on the way.

On the twenty-third of February the sun reappeared, and on the tenth of March Jackson and Armitage, with Blomgvist, a Russian Finn who had shipped as one of the *Windward's* crew and now showed himself a most useful member of society, set out on a seven days' journey northward. For four days most unpleasant weather prevailed, and dense fog, intensified by clouds of drifting snow, made it a hard matter to see even large hummocks a few yards distant. Nothing could have been worse for sledge work with ponies, for the white fog-light cast no shadows; level snow, holes, and heaped-up drifts all looked exactly alike, and the impossibility of distinguishing between them led to much floundering and many stumbles. During this journey the value of Jackson's sleeping-out experiment was fully tested,

and, warmly clad in Samoyed fashion, the three travellers slept comfortably, though the thermometer registered 77° of frost.

In spite of fog, rough ice, and many difficulties, the explorers persevered, and in due time reached Peter Head, where they hoisted the Union Jack and established a depôt of provisions for future use. This was the main purpose of the trip, and when it was accomplished, as the continuance of the fog made it useless to stay out, the explorers retraced their steps, and on the sixteenth of March reached Elmwood in safety, though their hands and faces were much damaged by frost-bites.

About a fortnight after Jackson's return to Elmwood, the ice around the ship broke up suddenly with a noise like thunder, and a huge sheet of ice slid away from the port side, destroying or sending adrift a whale-boat, a sledge, and a Union Jack. On the landward side the *Windward* was still held fast, and as she was in a very awkward position, Jackson set all hands to ballast her with lumps of ice and to make preparations for getting up steam.

In the morning the gale which had caused the disturbance suddenly dropped, and as the snow cleared off an immense expanse of open water became visible. It was too early in the year for escape to be possible, so the *Windward* remained at anchor to await developments. These were not long in coming, for a few hours later a vicious-looking floe bore down upon

her; but as she lay clear of the main stream of the current, the floe just missed her and struck the ice-foot with such force that huge floe-bergs were broken off and piled one upon another in "most admired disorder." The shock seemed altogether too much for the floe, and, pivoting round, it embraced the ship in the most loving manner, and once more gently imprisoned her.

On the sixteenth of April Jackson, Armitage, and Blomgvist, with three ponies and six sledges, set out on an extended expedition to the northward, attended by Koettlitz and Hayward, who, with the other pony and two sledges, accompanied them for a few days as a supporting party. During the whole journey the weather and the travelling were almost equally bad. Apparently the ice was already beginning to break up, for wide cracks began to open, while the snow, soaked by the water which oozed through the rotten ice, was so sloppy that the ponies floundered helplessly, and had frequently to be hauled out of the deep holes into which they unwittingly stumbled.

On the first of May a violent gale and snow-storm compelled the travellers to halt. They had then reached 81° 19′ 30″ north latitude, and land was not far distant on the east, but on the north and west nothing but snow-covered sea-ice was visible. They stayed in their camp for two days until the wind moderated, and then, as the breaking up of the ice seemed imminent, and water-sky was visible in more

than one direction, Jackson reluctantly decided to go back while the ponies could travel safely. No time was lost on the homeward journey, and the party generally marched thirteen or fourteen hours daily, no matter how bad the weather might be. In many places rotten, dangerous ice was covered with an innocent-looking coating of snow; and once, while crossing a death-trap of this description, one of the ponies broke through. Fortunately he was a quiet little fellow, else it would have been almost impossible to save him; but Jackson managed to slip the reins round his neck, and all the men hauled together until, dripping and shivering, the rescued pony stood safely on the ice. This adventure made the need of haste more apparent than before, but progress was very slow until Jackson hit on the device of muffling the ponies' feet in empty oat bags padded with hay, which to some extent held them up. They then got on a little better, and on the thirteenth of May the explorers arrived at Elmwood.

The journey had not been a profitless one. The party had travelled by new routes, and their experience showed that the map made by Payer, one of the Austrian explorers who discovered Franz Josef Land, was in many points totally incorrect. Franz Josef Land did not consist, as Payer had thought, of large masses of land, some of them mountainous: there was, in fact, no large extent of land anywhere, but merely a multitude of islands; and in many places

where the original map led Jackson to expect land, he found nothing but water. Payer, however, had had no opportunity of going over the ground. He had only surveyed it from a distance and in bad weather, which might well make it a hard matter to discriminate accurately between ice that was on the land and ice that was on the sea. One land mass in particular—Zichy Land—believed by the Austrians to be "a vast mountainous region," resolved itself into a chain of islands running northwards towards Austria Sound, an extensive channel whose supposed coast-line was greatly modified by the new discoveries.

By the beginning of July the ice had broken up sufficiently to allow the *Windward* to begin her long-delayed homeward voyage. Blomgvist, however, preferred to stay in Franz Josef Land; so, as Jackson and the others were agreeable to the arrangement, he transferred his property to Elmwood. The *Windward* sailed on the eighth of July, but she had not proceeded far when she encountered a heavy pack which extended east, west, and south as far as the eye could reach. Should she go back or try to force her way through? The latter course seemed the more desirable, and into the pack she went—now ramming her way past opposing floes, now insinuating herself into some narrow channel, or again stopped altogether, and forced to wait until the pack should see fit to open. Day after day the struggle continued. Open water seemed to be as far distant as ever, and long before

she reached it coal ran short. Every spare scrap of wood on board was broken up to feed the furnaces, but the supply soon came to an end, and top-masts, yards, bulwarks, bulkheads—even the bridge—one after another had to go to keep the engines at work. The men laboured incessantly; but cold, fatigue, and hardship began to tell on them. Scurvy broke out, and before the ice was left astern three of the brave fellows were added to the noble army of heroes who have laid down their lives in the cause of science.

British pluck and perseverance triumphed in the end, but it was not until the middle of September that the *Windward* reached Vardö. Having arrived at that far northern port the rest was easy, and in due time the dilapidated vessel steamed up the Thames, still bearing "plain, for all folk to see," the marks of her recent victorious struggle with the ice-floes of Barents Sea.

## CHAPTER XVII.

### STORMS AND SUNSHINE.

WHILE the *Windward* was fighting her way through the ice, Jackson, Armitage, Fisher, Child, Blomgvist, and Koettlitz were engaged in a hardly less hazardous voyage in their whale-boat, the *Mary Harmsworth.* They left Elmwood on the eighth of July, with a month's provisions, and sailed westward, at first without any difficulty; but when on the thirteenth of July they neared Cape Crowther, so much heavy ice was drifting landward that they dared not risk the boat in it. Where they were no shelter was available, so they returned to Cape Grant, where they encamped for a season.

During this enforced delay the explorers occupied themselves in various ways. Armitage, with one or two companions, made a trip to Elmwood, and the rest of the party spent the time in dredging and otherwise, searching for curiosities, both marine and terrestrial. Several days passed thus, but at length the ice cleared off, and on the morning of the twentieth of July the voyage was resumed. At Cape Crowther bad weather

forced them to stop, but on the twenty-second of July they pushed on to Cape Neale, where most of the party camped, while the boat went back to Cape Grant to fetch provisions from a depôt which had been established there.

Again the specimen-hunters set to work, and one day, while investigating the summit of Cape Neale, Jackson caught sight of a hitherto unknown headland far away to the westward. Having seen it, the next thing was to visit it, and on the twenty-eighth the party again embarked in the *Mary Harmsworth.* While crossing Cambridge Bay another lofty headland came in view to the northward; it seemed to be the southern point of an island, but Jackson could not spare time to inspect it, and he contented himself with giving the headland the name of Cape Fridtjof Nansen. Having left Cambridge Bay astern, the explorers pursued their way along the southern coast of Alexandra Land, until a bend in the shore revealed the magnificent headland which Jackson had seen from Cape Neale. It was fully two thousand feet in height, and from sea to summit its rocks were shrouded with the eternal snow, whose whiteness gleamed in vivid contrast to a background of lowering sky. Towards this majestic cape, to which its discoverers gave the name of Mary Harmsworth, the boat was steered, but before the explorers reached it the weather changed; a dense fog came up, and the rising gale set the ice in motion. It was evident that a storm was

brewing, but the boat went slowly onwards, and notwithstanding fog, snow-squalls, and the threatening aspect of the weather generally, those of the party who could draw coolly sketched the cape.

But their artistic efforts were destined to be brought to an abrupt conclusion. The wind blew more and more fiercely, and while on the one hand the swirling floes and raging sea threatened the boat with destruction, on the other, the ice-foot which bounded the shore offered no shelter whatever. There was nothing for it but to try to ride out the gale; over and over again the boat was nearly swamped, and twice her side was stove in by the ice. It was all her crew could do to keep her afloat, but by incessant bailing they managed it somehow, though by the time the gale was over they had drifted about fifty miles out of their course. Then, fortunately, the wind changed, and enabled them to run without difficulty to Cape Grant.

For several days no one had had a wink of sleep, and the difficulty of getting at the provisions had compelled the hungry men to content themselves with an occasional dry biscuit. But now that they were once more ashore, the aspect of affairs was entirely changed; there was no further necessity either to fast or to keep awake, and in the delights of a hot supper, a long sleep, and plenty of room to stretch their cramped limbs, the explorers forgot their past troubles, and in the morning they were quite ready

to begin repairing their damaged boat. Before the work was finished another gale drove up so much heavy ice that, as winter was evidently approaching, Jackson considered it unwise to prolong his absence from head-quarters. He did not, however, see any reason for hurry; so, by reason of sundry stoppages on the way, another week elapsed before he got back to Elmwood. It was lucky he did not delay longer, for the very day after his return such a heavy pack drifted in that boating would have been out of the question.

Though it was only the twelfth of August, further exploration could not be attempted that season, but there was plenty to do before winter set in. Various domestic details needed attention, and more important still was the storing up of a good stock of game, and the hunters were kept fully employed in shooting. In this their success was certainly phenomenal, seeing that, in addition to a good many bears and seals shot by various members of the party, one man added twelve hundred looms to the bag. Jackson also laid in a supply of carefully-frozen fresh scurvy-grass, to serve as salad when nothing better was to be had.

The second winter at Elmwood passed as pleasantly as the first had done, though some of the party suffered at times from sleeplessness—an effect of the darkness which may sometimes have been convenient, for meteorological observations were taken regularly at intervals of two hours. The sleeping difficulty

was, however, only a passing one; it completely disappeared when the sun returned, and otherwise everybody enjoyed perfect health.

About the middle of February unusually warm weather set in, and snow-storms were of very frequent occurrence. Travelling prospects, in consequence, were not encouraging, for the snow did not harden, but covered the ice with a thick, wet layer nearly as sludgy as that which had given so much trouble in the preceding spring. Nevertheless, preparations for travelling were actively carried forward, and on the eighteenth of March Jackson, Armitage, and Blomgvist again set out on their way northward, taking with them one pony and sixteen dogs to draw seven sledges laden with about two thousand pounds of stores. These included six weeks' forage for the pony, and twenty-four days' rations of tinned beef for the dogs—a rather scanty supply, which Jackson confidently expected to supplement with bear-meat.

Fortune favoured the explorers, for just before they set out a sudden fall in the temperature hardened the snow to an excellent travelling surface. Over this the sledges advanced swiftly; but on the twenty-sixth of March, near the eighty-first parallel, they suddenly found themselves at the edge of the pack, with the blue sea stretching away to the northward. Progress being stopped in that direction, they turned eastward in a thick, driving snow-storm, and reached land before camping-time. The next morning the

snow had ceased falling, and as the sun shone out gloriously, Jackson and Armitage went up to the highest point of a neighbouring cape, whence they obtained a magnificent view.

A large sheet of open water, which Jackson named Queen Victoria Sea, stretched indefinitely northward; westward lay the British Channel, up which they had travelled. Beyond this the white shores of an ice-capped land glittered in the sunshine, and to the north-west and north three other islands were vaguely seen. To the north-east high ground hid the distant view, but a dark water-sky indicated the presence of open sea beyond and among the islands which represent the supposed continental tract called Zichy Land by Payer.

Further advance was impracticable, so Jackson and his companions turned their faces southward, and spent a great part of April in investigating the islands and channels north of Hooker Island. The result of their explorations was the confirmation of the previous year's work, and many well-known names were bestowed on the islands, capes, and straits, now discovered. The return journey was safely accomplished; and after reaching Elmwood, towards the end of April, Jackson occupied himself with photography. He specially desired to obtain characteristic likenesses of Arctic beasts and birds at home; and with this end in view, when a bear came in sight he would wave his rifle and gesticulate until,

Bruin's curiosity being excited, he came stealthily forward to see what such conduct could mean. As he approached, the ardent photographer, crouching down as low as he could, took snap-shot after snap-shot, until it seemed undesirable to allow the bear to come nearer, when the camera was exchanged for a rifle, and the inquisitive animal paid for his curiosity with his life. The collection of specimens, too, went on briskly; but no bait that could be devised tempted the fish, and the piscatorial museum seemed unlikely to be filled, until some one hit on the plan of watching for the gulls and other birds, and shooting them when they came ashore, as they often did, with fish in their beaks.

Thus in one occupation and another time went on until the seventeenth of June, when, just as dinner was over, Armitage, who was on his way from the observatory, opened the door in a hurry, shouting,—

"How many of you are here? I see a man on the floe."

Everybody was present, so clearly the man, whoever he might be, was a stranger. This was exciting, and Jackson rushed out with the words,—

"Whoever it is, I am off."

The others seized telescopes and field-glasses, and watched the proceedings from where they were. In a little while the two met, shook hands, and then, after standing still for a few minutes, walked towards the house. Who on earth could the stranger be?

Armitage suggested that he might be Nansen; and as the idea at once caught on, the whole party turned out to meet and welcome the Norwegian explorer.

The next six weeks passed rapidly, and then early one morning the establishment was aroused with the good news that the *Windward* had arrived. Another hearty welcome was given to the Norwegians as soon as they appeared on board, but there was little time for social amenities, as Captain Brown was anxious to discharge his cargo with all speed, in order to get clear of the ice before winter set in. Less than a week saw the completion of the work, and on the seventh of August Nansen and Johansen, accompanied by Child, Burgess, Fisher, and Blomgvist, who also were homeward bound, took up their quarters on board, leaving Jackson and the rest of his party to prosecute their researches in Franz Josef Land. The voyage was a very pleasant one, for on Captain Brown's ship hospitality reigned supreme; and though the ice did all that in it lay to oppose the *Windward*, she was so superbly handled that she quickly found her way through the pack. On the thirteenth of August, six days after leaving Elmwood, she dropped anchor at Vardö, and in a few minutes more the telegraph flashed over the world the good news that Nansen and the Jackson-Harmsworth Expedition were safe and sound.

## CHAPTER XVIII.

### HOME, SWEET HOME.

ALTHOUGH force of circumstances had caused Nansen to leave the *Fram*, he did not feel that this in any degree lessened his responsibility as leader of the expedition. He had implicit confidence in Sverdrup, who succeeded him as general director, and his belief in the powers of the *Fram* were almost equally great. Still accidents *might* happen, and in view of the "not impossible," he wrote out for Sverdrup's benefit a paper of hints and advice applicable to almost every conceivable emergency. In this he urged Sverdrup to make all preparations for a sledge journey over the ice, should it for any reason be necessary to abandon the ship.

These directions were loyally obeyed; and during a great part of the year, in addition to their other work, the crew were busy preparing to leave the ship. Stores and clothes were overhauled, dog-harness and boats put in order, and ski and sledges constructed, though to obtain material for the latter it was necessary to dismantle the windmill. This, however, mattered

little, as portions of the machinery were so much the worse for wear that under any circumstances the electric light would hardly have been available.

The first thing necessary was to release the ship from the masses of ice which had piled themselves on and around her during the pressure which so nearly proved fatal in January 1895. This was a work of time, and it was not completed till the end of March; but no sooner had the last of the superfluous ice been removed, than the floe began to crack in all directions, and a broad lane opened within a few feet of the stern. It really seemed as though the ship were within measurable distance of being released; in fact, as time went on and the cracks extended, all the ice broke away from the bows. The stern, however, was still fast held; and towards the end of July, in the hope of freeing her altogether, the crew undertook to blast the ice with gun-cotten and gunpowder. The mine exploded with a violent shock, but in spite of the commotion the ice appeared to be little the worse for the rough treatment which it had received. How was it? One suggested this, another that, and a lively discussion was in progress when the floe solved the mystery for itself by breaking to pieces; while the *Fram*, suddenly released from her long captivity, gave a lurch, and with a noise like thunder slid down into the water. Her position now was not a particularly desirable one, for, though afloat, she was completely surrounded by ice, so all hands set to

work to make a safe harbour and warp her into it. Shortly after this was accomplished she was again firmly frozen in, but several times during the winter the ice again broke away from her, leaving her almost free.

During the early part of the year the *Fram* was borne steadily north-westward, and at the end of July she had reached 84° 50′ north latitude; but then the drift changed its direction, and for some time drove her eastward. This, though vexing, was not disconcerting, for the same thing had occurred before. The result justified the confidence of the explorers, for on the sixteenth of October the *Fram* had arrived at 85° 57′ north latitude, and 66° east longitude. This was her highest recorded latitude, for though, some days later, she attained a still higher latitude, the weather was cloudy, and no more observations could be taken until after the current had changed its direction, and a steady, south-westerly drift had set in.

All this time work on board went on as usual, and the reduced crew found that they had quite enough to do in keeping pace with the various occupations which crowded upon them. As winter came on, they made the usual preparations for their comfort, which seemed likely to be somewhat impaired by the absence of the electric light, though, owing to Nansen's forethought in using coal-oil for fuel instead of petroleum, they had an abundant supply of oil for as many lamps as

they chose to use. This winter passed very much like its predecessor. There was nothing to disturb the even course of life, which continued in the same monotonous round of domestic duties, scientific work, eating, and sleeping. Even the ice did nothing very startling, though in January 1896 several water-lanes opened near the ship, and more than one slight nip took place. The worst thing the explorers had to put up with was the unavoidable monotony of seeing the same faces day after day, and sometimes, by way of variety, the men would start off on long, solitary tramps over the ice, each one carefully avoiding everybody else.

When Nansen started on his northern journey, he took with him all the dogs obtained in Siberia, leaving only seven half-grown puppies. These, in turn, increased the canine contingent with more puppies; and though a few of these died of convulsions, many of them grew up into fine, healthy dogs, whose tricks and odd, playful ways were a frequent source of amusement. It was observed that the puppies born on board had none of the quarrelsome ways of their ancestors, and they lived as peaceably with each other as they did with their masters.

During the whole of the summer and the greater part of the winter no bears came near the ship, but on the twenty-eighth of February two fine ones were seen at a little distance. Of course everybody was anxious to secure them, and, as the best means

of getting them within range, a savoury compound, mainly consisting of onions fried in butter, was brought out as a bait. The device succeeded admirably; up came the bears, and as soon as they were within rifle shot Sverdrup fired, and the bigger of the two rolled over in the snow. His next shot, at the second bear, was equally successful; but neither of the animals was killed, and in a few seconds they both scrambled to their feet and made off. Two more balls failed to stop them, and Sverdrup rushed after them in hot pursuit, which ended in the addition of a good stock of bear-meat to the larder. These two bears were the forerunners of many more which were shot during the spring and summer, sometimes after a rather exciting chase. On one occasion a small cub was brought on board alive. His captors would willingly have tamed him, but he conducted himself in such a hopelessly unfriendly manner, and, except when he was eating, kept up such an unearthly din, that Mogstad, after a few hours' endurance of the noise, put an end to it by knocking him on the head with a hatchet.

In February the southward drift ceased, and, until the middle of May, the ship made no way whatever. Then she was again carried southward, and in June had reached a place where the tidal action seemed to be peculiarly strong. The ship was so placed that, as the tide rose and fell, the ice around her was periodically jammed together and again allowed to open.

She was thus alternately lifted up in her bed from six to nine feet at a time, and then lowered an equal distance. So gently, however, did this ice-motion go on that, when it occurred at night, even the lightest sleepers were undisturbed by it.

During the early summer of 1896 several attempts were made to free the ship from her icy bondage. This could only be done by blasting, but much gunpowder and gun-cotton were expended before the desired result was attained. Once Sverdrup and another man very nearly came to grief. They had successfully laid their charge and lighted the fuse, when suddenly the ice, which they had believed to be firm as a rock, broke under them, and let them down into the water close to the mine. To climb up to the high slippery edge of the floe was far from easy, but the knowledge that in a few seconds the fuse would have burnt out and the light have reached the charge greatly expedited their movements, and they scrambled out and reached a place of safety in time to avoid any mishap worse than an undesired cold bath.

At last the strong persuasion brought to bear upon the ice prevailed, and once more the *Fram* was afloat in her proper element, but it was some time before she could get clear of the pack. Lanes and pools, however, opened conveniently, and by patiently biding their time and seizing every opportunity which offered—sometimes drifting with the ice, sometimes toilfully warping the ship through narrow lanes and

channels—little by little the energetic explorers forced her through the pack. About the middle of July the pack began to open, and with the view of making the most of his opportunities, Sverdrup got up steam, and the *Fram* slowly forced her way onward, sometimes butting against a floe and smashing it before her, sometimes shoving her way through the narrow channels which she contrived to open, sometimes stopped for a time by ice which even she was bound to treat with respect. Day after day this continued. July gave place to August, but still there was no sign that the pack had any edge at all; and it was not until the thirteenth of August that the *Fram* steered triumphantly into open water, after ploughing through more than one hundred and fifty miles of tremendously heavy ice.

When the *Fram* left the ice the weather was foggy, but after a while the mist lifted and revealed a small schooner, the *Söstrene* of Tromsöe. Directly the crew caught sight of the *Fram* they raised a hearty cheer for the gallant little ship. Captain Bottolfsen hurried on board the *Fram* to pay his respects to the explorers. Naturally the first question was whether Nansen had returned; and when the captain replied that when he left Tromsöe nothing had been heard of Nansen and Johansen, most of their comrades lost all hope of ever seeing them again. Sverdrup, however, had full faith in his leader's powers, and he alone never doubted that Nansen was safe and sound somewhere. Little

did he think that at that very moment the two explorers were safe at Vardö, and that Norway was even at that moment ringing with the news of their return.

As Captain Bottolfsen could give no news of Nansen, Sverdrup and his comrades, after some consultation, agreed to go on with all speed to Norway to find out if Nansen had returned since the *Söstrene* sailed. If he had not done so, his comrades intended, as the *Fram* was amply stored with everything necessary for an extended voyage, to sail at once for Franz Josef Land, for Sverdrup thought it very probable that he had fallen in with the Jackson-Harmsworth Expedition, and was passing the winter with them. The *Fram*, therefore, steered for the nearest Norwegian port, and having put her best foot foremost, on the night of the twentieth of August she anchored in front of Skjærvö, a small seaport in Finmark. It was nearly midnight, but Sverdrup at once went ashore to telegraph the news of the *Fram's* return. The postmaster, however, was in no mind to be disturbed at that hour, and showed little disposition to open the door until Sverdrup, in answer to his vituperations, tranquilly remarked: "My name is Sverdrup, and I am captain of the *Fram*."

The information worked like magic, and saying, "I will come directly," the postmaster shut the window; and when Sverdrup reached the door, he found the official waiting there to receive him, with the welcome

news that his two comrades Nansen and Johansen had come back.

Forgetting his telegrams, Sverdrup rushed down to the shore to shout the good news to his companions, and careless of the consideration due to the sleeping inhabitants of Skjærvö, they thundered out their welcome in a salute from the *Fram's* two guns. The next thing to be done was, of course, to telegraph to Nansen, who with his wife was now at Hammerfest. The message, which reached its destination at an early hour of the morning, was simple enough: "*Fram* arrived safely; all well on board; leaves at once for Tromsöe. Welcome home." The reply of Nansen was equally short and to the point: "A thousand times welcome to you and all. Hurrah for the *Fram!*"

Now came the question: "What should be done to the men whom Norway delights to honour?" Nansen and Johansen lost no time in rejoining their comrades, and the reunited expedition, with Fru Nansen, Fru Sverdrup, and other friends and relations, arrived on the ninth of September at Christiania. A magnificent welcome awaited them, for Norway, from the king to the youngest child, was proud of its heroes; and while the *Fram* was escorted up the fjord to her anchorage, guns thundered forth their salute from the shore.

Having cast anchor in the Pipervik Harbour, Nansen and his comrades landed, and then, having been form-

ally received by the "city fathers," they were taken in triumphal procession through the streets to the palace, where the king and the crown-prince welcomed them in right royal style. But Nansen's crowning joy was yet to come, and when a little later he saw and greeted his three-year-old daughter Liv, he knew that he was at last verily at home, sweet home.

## CHAPTER XIX.

### LAST YEAR IN FRANZ JOSEF LAND.

WHILE the *Windward,* with Nansen and Johansen on board, pursued her homeward way, Jackson and his comrades continued their work in snowy Franz Josef Land. It was too late in the year to make any distant excursions, but there was plenty to do in other ways, for preparations had to be made for the approaching winter, and also for the sledge journeys which Jackson hoped to undertake when spring came round. Snow-boots were constructed for the pony, and a tent and a canvas canoe for the explorers' own use, and there was always plenty of scientific work on hand, in the way of taking and recording observations, and making and classifying botanical, geological, and zoological specimens. There was no room for idlers in that busy little Arctic settlement.

In March, Jackson and Armitage set out with thirteen dogs and the only surviving pony to examine British Channel, and to discover the exact whereabouts of a "high land" said to have been sighted in 1707

by a Dutch navigator named Gillis, and called by his name. Since Gillis's day many explorers had endeavoured to reach the land in question, but one after another was unsuccessful, and only two so much as sighted it. Yet both they and Gillis assigned nearly the same position to this unapproachable region, and Jackson now intended to do his best to make it reveal its secrets.

Very soon after the explorers left Elmwood their troubles began. In the absence of hay, the accommodating pony consented to eat dog-biscuits and dried vegetables, with an occasional relish in the form of a few oats. This somewhat unusual diet agreed pretty well with her when consumed in moderation, but, unfortunately, on the second night of the trip, she contrived to break loose, and made an ill-advised and immoderate meal of the dried vegetables. The result was that she became dangerously ill, and her masters were obliged to dose her with all the pills which they had taken with them in case of emergency. These were intended for human, not equine, consumption, and comprised at least three varieties; but when formed into a ball with some frozen fat from the frying-pan, they had the desired effect, and the pony so far recovered that she was able to go on. With proper food she would doubtless have got quite well, but, as it was, she continued weak and ailing.

Then the weather distinguished itself by becoming exceedingly disagreeable, and heavy adverse gales,

with or without driving, blinding snow, alternated with dense fogs. Underfoot the conditions were equally unpleasant, for the ice, in many parts crushed and broken, was covered with a thick layer of soft snow, which made travelling difficult for all, and was specially bad for the pony, who was so weak that she often lay down in the snow, apparently unable to go farther. On these occasions Jackson and Armitage took the dogs on for a short distance with some of the loads, and then returned to fetch the pony and the rest of the property.

After a toilsome journey they reached Cape John Murray, a bold headland three hundred feet high. A fresh gale was blowing, but Jackson ascended the cape, whose boulder-strewn crest appeared to have been raised from sea-level to its present elevation. When he came back, the wind, for once, was blowing in the right direction, so sails were hoisted on the sledges. The favourable wind only blew for a few hours, but while it lasted good progress was made, and a day or two later a new fjord was discovered. A lofty cliff, consisting chiefly of basaltic columns, which contrasted strongly with the ice-clad shore around, kept guard over the entrance, and Jackson called it St. Chad's Head. Here the explorers decided to camp, and, while Armitage pitched the tent, fed the dogs and the pony, and cooked supper, Jackson went off with his ski and his camera to explore the neighbourhood. There was little to see: on one side water, ice, and

snow; on the other side, ice and snow, varied by the black columns of the cape, and a few—a very few—mosses and lichens, and one solitary saxifrage.

From this dreary spot the explorers pushed on across the mouth of the fjord, and in due time reached the lofty basaltic headland which formed its northern limit, and was named Cape William Bruce, in honour of the zoologist of the expedition. From the summit of the cape an extensive view was obtained. To the northward three ice-capped islands were discernible, as well as a vast extent of broken sea-ice, with open water-pools and lanes; to the south-westward the view was much obscured by mist, but it was seen that the fjord recently crossed was connected at its western end with the sea. The land on which the explorers stood was therefore surrounded by water, and Jackson named it Albert Armitage Island, in compliment to his fellow-traveller.

On the cape itself he built a cairn, in which he placed a tin case containing a Union Jack, a record, and a penny; while, to crown the whole, he attached another Union Jack to a bamboo flagstaff, and fixed it on the top of the cairn. Meanwhile Armitage was occupied in the more prosaic work of striking camp, but it was impossible to go far, for the weather became worse than ever.

To proceed in the teeth of a furious gale, accompanied by blinding snow and dense fogs, was manifestly out of the question. The cold, too, was intense, for

the thermometer registered 78° of frost, and in spite of all the care that could be bestowed upon them, the poor dogs suffered terribly. One morning when Jackson went to see them he found them all well, but an hour or two later one dog was dead and frozen as stiff and hard as rock, and a second was in desperate case, being frozen to the ground and unable to stir. Jackson was just in time to save his life, for after being hacked out of the ice and thawed, he recovered. Other dogs shared the fate of the first, and by the seventh of April, when the travellers reached the head of Cambridge Bay, only five of the thirteen were alive. The pony still kept up, but she was scarcely able to work, and travelling became very hard, for it was necessary constantly to help with the loads, which were too heavy for five dogs and a sick pony to manage unaided.

For some days the route lay along the low northern shore of Cambridge Bay, but on the tenth of April the explorers suddenly reached the end of the low ground. A few miles farther on the sea-ice also broke off, and the waves dashed on the face of a huge ice-cap which covered the land and extended westward and southward for many miles. The travellers had to choose between returning and crossing the land-ice, so the next morning the sledges were laboriously hauled up the steep ascent. At last, after a great deal of exertion, men, pony, dogs, sledges, and loads were safely landed on the top, with a smooth,

even expanse of snow lying ahead. It looked tempting, but was, in reality, treacherous, and the travellers had not gone far when the pony sank, with all four legs, into a hidden crevasse. A belt of hard snow still supported her, and, being too much astonished and frightened to move, she lay still while her masters endeavoured to pull her up. In doing this Armitage nearly came to grief himself, for, having taken off his ski, he suddenly sank up to his waist, but, his arms being free and the snow fairly hard, he was able to scramble out unaided, while Jackson looked after the pony. Then, cautiously approaching, the men contrived to fasten a cord round her neck, and after some trouble to haul her on to firm ice. A few minutes afterwards a similar accident happened, but this time only her hind legs broke through, and it was comparatively easy to release her. The ice was obviously not to be trusted, and at camping-time Jackson, profiting by his recent experiences, carefully tested the neighbouring snow with a pole.

But the explorers seemed doomed to misfortune. The next morning the weather was so bad that they were obliged to stay in camp, and this time the poor old pony fell a victim to the cold. In the evening Jackson heard a noise outside the tent, and on going to see what was the matter he found that the pony was vainly trying to rise. A few moments later he was joined by Armitage, and the two endeavoured for some time to raise her; but she was too weak to stand,

and sank down again. She had shared so many hardships and dangers that she had become the pet and friend of the whole expedition, and her masters did all in their power to restore her. But even "all" was grievously little, and they saw, with saddened hearts, that their faithful helper was fast dying. They gave her the few remaining oats, and covered her up as warmly as they could; but by the next morning she was dead, and when Jackson went to see her he found that she was frozen hard. Her death was a serious loss in more ways than one, for besides being an old and valued friend, she had constituted about half the hauling strength of the party.

A day or two later the weather improved, and then, as it was impossible to haul everything, the most necessary articles were selected and repacked. These included a tent, two canoes, instruments, ammunition, guns, and a quantity of provisions; so, though three sledges were abandoned, the weight was still considerable. The difficulties were not lessened by the roughness of the ice, which, every few yards, made it necessary to stop and help the dogs. Jackson hauled in front, while Armitage, in the rear, shoved, shouted, and did all he could to encourage the tired but willing team; yet, in order to advance all the loads, it was necessary to go over the ground at least three times. The fog now became denser than ever, and in consequence everything—tent, clothes, and implements—was covered with hoar-frost, which sometimes froze into

sheets of ice three or four inches thick, and melted when the men got warm in the tent, reducing their furs to a condition of sloppy limpness that lasted until morning, when the cold outer air quickly converted the moist furs into icy armour of iron-like hardness. They had now reached a point from which Gillis Land should have been visible, but when the fog lifted and allowed them to obtain a distant view not a sign of it could be seen, and they were forced to the conclusion that an error had been made, for in the latitude and longitude assigned to it in the charts no land existed.

Storms and fogs still caused a great deal of delay. Sometimes it was possible to march for a few hours, but very often all that could be done was to sit in the tent and "wait till the clouds rolled by." It was weary work, and by the nineteenth of April both men were so heartily tired of it that they decided to leave the high glacier-top and travel along the shore. Jackson went on his ski to reconnoitre, and having cut across the back of Cape Mary Harmsworth, which they had now discovered to be the most westerly point of Franz Josef Land, he descended to the head of Nordenskiöld Bay; but the sea-ice was broken and impracticable, so the travellers were forced to cross the ice-cap behind Cape Lofley. Beyond this point the sea-ice, though bad, was traversable, and they were able to make a short cut across the bay. Then it again became necessary to take to the land, and once more—thanks to a conveniently-situated snow-drift—

the sledges were somehow hauled up an almost perpendicular glacier-face. The top was reached in safety, but here the weather so strenuously opposed any further advance that the travellers had to stay for three days before it consented to modify its objections. This delay, though annoying, was not profitless, and, indeed, was scarcely regretted, since a fine bear, having been led by curiosity to visit the camp, fell a victim to the rifles of its inmates. Dogs and men were rather short of food, and the supply of spirits for fuel was becoming unpleasantly low; but all these difficulties were removed by Bruin's welcome advent, for the fat burned capitally, and while the men enjoyed a good meal of bear steaks, the dogs revelled in such a feast as they had not enjoyed for many a long day.

Crossing the cape was no easy matter, for soon after the travellers got under way they were again forced to halt by another tremendous gale which filled the tent with drifted snow. After blowing furiously for some hours the wind dropped, and the sky cleared sufficiently to allow Jackson to take some observations and a few photographs, and then another attempt was made to cross the cape. This time success attended the explorers, and after a good deal of trouble they reached the sea-level, but they had to go for some distance along the coast before the condition of the ice allowed them to strike off across Cambridge Bay. At this part of the trip they were making excessively

long marches, sometimes going on for twenty-four hours without camping. It was hard work both for men and dogs, but in view of the numerous delays and the state of the commissariat, unusual exertions were necessary.

The ice in the bay was in very bad condition. In some places it was almost impassable, and the utmost exertions of dogs and men could only advance the sledges one at a time. One of the canoes was abandoned, but even then the party could only travel very slowly. Bad weather caused further hindrance, and on reaching Cape Grant open water blocked the way. The face of the glacier, fifty feet high, frowned uncompromisingly at the daring explorers who had broken into its solitude, and they had to go almost to the head of Gray Bay before they could find a spot where there was even a possibility of ascending. Having climbed the forbidding glacier, their worst difficulties were at an end, and on the fifth of June they reached a house built by Mr. Leigh Smith on Bell Island.

A few hours later they were agreeably surprised by the arrival of Dr. Koettlitz and Messrs. Bruce and Wilton, who had become so uneasy at their long absence that they set out with a stock of provisions to search for the wanderers. The meeting was a joyful one, and after rest and refreshments the whole party returned to headquarters, and spent a few days in breaking-in some hitherto untried dogs for sledging.

The next journey was a short one. Jackson desired to go as far as Brady Island and map out sundry portions of coast not as yet properly laid down on the chart. With this end in view he and Armitage set out together with a sledge, but no boat, and travelled without any difficulty to the neighbourhood of Cape Cecil Harmsworth. Here the thick old ice suddenly gave place to thin new ice, but, as snow had for some hours been falling heavily, the change could not be discerned. Jackson and Armitage were serenely proceeding with the sledge, and were within a few hundred yards of the shore, when, without any warning, the ice gave way, and the heavily-laden sledge subsided into the water. Both men hauled with might and main, and, in order to obtain steadier foothold, Jackson took off his ski, but was obliged hurriedly to put them on again, for the untrustworthy ice refused to bear his weight without the extra support of their length, and he barely escaped a ducking. All efforts, however, were useless; the ice was evidently quite unable to support the sledge, and bent so ominously that the explorers were forced to relinquish the attempt to save their property in bulk. All they could do was to pull off a few things from the back of the sledge, but before they could rescue any of the provisions the whole thing turned over and sank like a stone. Fortunately some eatables had been put out for lunch, and these furnished a scanty meal.

Both men disliked to be beaten, and, though they

had no food and their cartridges were soaked, they tried to make their way to the shore, hoping to ascend the high cliffs of Cape Cecil Harmsworth, whence they might survey the coast. But fate was against them. The rotten ice would not allow them to reach the shore, and they were forced, very reluctantly, to retreat. The return journey was accomplished in two forced marches, the first and longest of which lasted nearly twenty-six hours.

In July the *Windward* once more made her appearance. Mr. Harmsworth did not wish to send her out again, so in a few days Jackson and his comrades, with their dogs and other belongings, went on board. As the ice was open and the season favourable, the gallant little vessel first steamed along the southern shores of the archipelago to Cape Mary Harmsworth, where she lay while the expedition landed to explore the neighbourhood of the cape more thoroughly than had before been practicable. Her head was then turned north-westward, but, though she steamed fifty miles in that direction, not so much as a rock or islet was to be seen, and it became more certain than ever that Gillis Land was non-existent in the locality generally assigned to it. Then at last the *Windward* was steered homeward, and after a most prosperous voyage she reached Gravesend on the third of September. All were well on board, and on this occasion the ice had treated her so considerately that she showed no signs of rough usage such as had been